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NO. 2011-2775

From: Adkins, Phillip [Phillip.Adkins@dps.texas.gov]
Sent: Wednesday, November 09, 2011 9:15 AM
To: vot1973c (CRT)
Subject: Texas DPS
Attachments: DL Business Analysis Report.pdf

Attached is the report containing information regarding drive times to Driver License offices throughout Texas. I have included the entire report. The specific reference to a 52 minute average drive time that you asked about is on page 24. Also, I note that although the report is marked "Draft" it is the most recent report and the source relied upon in providing responses to your earlier questions.

Please let me know if I can provide you with further information.

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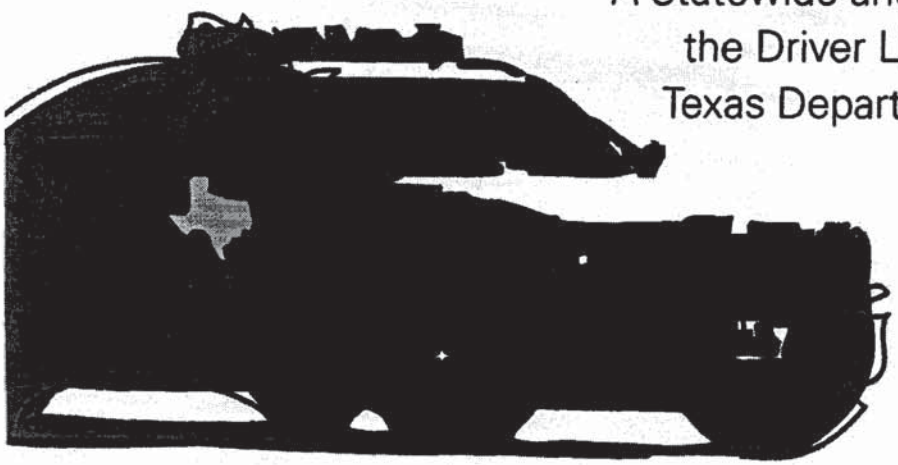
2011

BUSINESS INTELLIGENCE ANALYSIS REPORT

A Statewide and Regional Analysis of the Driver License Division of the Texas Department of Public Safety



Prepared by the
Government Partnerships Program
at Texas State University-San Marcos
2011

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Driver License Division Regional Managers and Assistant Managers

Table of Contents

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Table of Contents

(continued)

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Table of Contents

(continued)

1 Introduction & Purpose

Beginning in January 2011, the Government Partnerships Program (GPP) at Texas State University-San Marcos (TxState), funded by an interagency contract with the Texas Department of Public Safety (TxDPS) Driver License Division (DLD), conducted a statewide and regional Business Intelligence Analysis to improve the customer experience at driver license offices (DLO) and efficiently utilize TxDPS resources.

This report provides a detailed view of 2010 statewide and regional transaction and demographic data in the context of understanding the relationship between TxDPS DLD services and customers. It also outlines the methods and results of analyses, and provides recommendations for office staffing and new office locations.

BACKGROUND

TxDPS has been providing service to the Texas population since 1935 (Texas Department of Public Safety 2011a). TxDPS divides the state into six regions. The DLD further divides three of the six regions into two sub-regions each for a total of nine DLD Regions. DLD Regions 1A and 1B, in Northeast Texas, include Dallas and Fort Worth, respectively. DLD Regions 2A and 2B are in Southeast Texas and divide Houston into two parts. DLD Region 3 extends through South Texas and the Rio Grande Valley. DLD Region 4 contains El Paso and West Texas. Northwest Texas and the Texas Panhandle are contained in DLD Region 5. DLD Regions 6A and 6B, in Central Texas, include San Antonio and Austin, respectively (Figure 1).

Previously, Texas had 306 Driver License Offices (DLOs). After DLO closures due to equipment failures, Texas is currently served by 226 DLOs. DLOs are classified into four office sizes based on the number of full-time equivalencies (FTEs) at each office. The four sizes are:

- Small (0-3 FTEs)
- Medium (4-9 FTEs)
- Large (10-24 FTEs)
- Mega (25+ FTEs)

With a current population of approximately 25 million people and a 20.6% population increase in the decade from 2000 to 2010, Texas has one of the largest and fastest growing populations in the country (United States Census Bureau 2011b). Although population has increased and its distribution has changed, the resources available for TxDPS to provide service to the population have not increased. This has caused and will continue to cause strain on the DLD's resources (Texas Department of Public Safety 2011b). The population growth in Texas has not occurred uniformly across the state. Counties in and around major urban centers such as Houston, Dallas-Fort Worth (DFW), Austin, and San Antonio have been increasing in population while counties in parts of West Texas and the Texas Panhandle are experiencing population losses (United States Census Bureau 2011b).

Figure 1. Texas Department of Public Safety Driver License Division Regions.

Although the population distribution and demographic composition of Texas have changed in recent decades, the DLD's staffing levels, office locations, and business practices have remained relatively unchanged.

In July 2009, the Texas Sunset Advisory Commission, created to identify and eliminate waste, duplication, and inefficiency in government agencies (Texas Sunset Advisory Commission 2011), released an assessment report of TxDPS. They concluded that TxDPS "operates under a basic management and organizational structure that has not

changed significantly in many years" (Isett et al. 2009). One of the key recommendations was that TxDPS "should operate the Driver License program using a civilian business management model" (Isett et al. 2009).

PURPOSE

The two main objectives of the Business Intelligence Analysis were to:

1 Optimize the relationship of customers to driver license facilities by equalizing service opportunity at all office locations within the state of Texas while minimizing costs to the state and disruption to customers and employees.

2 Provide decision-makers with necessary data to improve understanding of decisions and their potential impacts.

The analysis examined TxDPS Driver License System (DLS) transaction and demographic data from calendar year (CY) 2010 to improve TxDPS understanding of customer demand and to achieve the main objectives of the Business Intelligence Analysis project.

2 Methods

Descriptions of all software, data, and methods employed to complete Workload Snapshots, understand customer demand, provide DLO recommendations including potential Mega DLO locations and DLO closures are detailed in this section. All methods were the best known procedures at the time of the analyses. Quality control measures were implemented and completed throughout the course of analyses for the validation of results.

SOFTWARE

Four primary software products were used during the analysis process.

1 Environmental Systems Research Institute's (ESRI) ArcGIS 10 is Geographic Information Systems (GIS) software that organizes, displays, and analyzes data spatially. ArcGIS was used throughout the project for geographic analyses.

2 ESRI's Business Analyst Desktop 10, or as it will be referred to in this report Business Analyst, functions as an add-on to ArcGIS. It combines GIS analysis and visualization capabilities with a data package containing demographic and business data. Business Analyst incorporates company or agency-specific data to aid in making accurate decisions about a specific company or agency (ESRI 2011). TxDPS and Business Analyst data were input into multiple models to analyze customer demand and TxDPS services.

3 Statistical Package for the Social Sciences (SPSS) is software used for data mining and statistical analysis. SPSS was used to manage and analyze DLS transaction data.

4 Microsoft Excel was used for data organization and calculations.

DATA VALIDATION AND PREPARATION

DATA

The DLS data were provided by TxDPS on January 5, 2011 and included driver license (DL) and identification (ID) transactions from April 15, 2009 to January 3, 2011. The DLS data provided included DL and ID transactions originating in the DLS as well as transactions batch processed into the DLS from the older DDL system. The DLS was progressively implemented across the state beginning in April 2009. The implementation of the DLS was important because DLOs not using the DLS were unable to track start and end times for transactions.

The DLS data will be referred to throughout this report as the Original DLS Dataset.

TxDPS also provided detailed DLO information in a document called the DLD Sites Spreadsheet (e.g. DLO lease expiration dates, existing FTEs, DLO hours, DLO type/size). Ongoing DLO closure information and existing office FTE carrying capacities (the maximum number of FTEs that could be allocated to an office) were also provided.

DATA VALIDATION

To begin data validation, the Original DLS Dataset was imported into SPSS. Using a data dictionary provided by TxDPS, data variables were assessed for accuracy and usefulness. The character length and data type were verified against the data dictionary. Additional validation included analysis of logical relationships between variables and consistency. For example, a transaction completed using the Internet should not have had a site code, or DLO location, associated with it. Spelling consistency was examined on string variables such as City, County, and Country of Origin. A uniqueness check was conducted on the Event Identification Number to ensure all transactions had a unique identifier. All inconsistencies and data issues were reconciled by the GPP with TxDPS.

TRANSACTION DATASETS

After data validations were completed, three datasets were created from the Original DLS Dataset: the Volume Dataset; the Field Usage Dataset; and the Field Processing Time Dataset. All datasets were created and analyses conducted using transactions from CY 2010. Only transactions from CY 2010 were used because most DLOs were not using the DLS in CY 2009. In addition, the use of one full year of data (available only for CY 2010) allowed for temporal analysis of transactions (i.e. monthly analysis). Every transaction in the DLS data was considered an initiated transaction. Initiated transactions had one of three statuses: In Progress, Cancelled, or Completed.

VOLUME DATASET

All transactions were initiated by customers through one of five Request Methods: Field (in a DLO), Texas Online Web (TOL WEB), Mail, Texas Online Interactive Voice Recognition (TOL IVR), or Other. Request Method Other refers to any transaction not requested using one of the four primary Request Methods. Initiated transactions with the Request Method Other were removed from the Volume Dataset under the direction of TxDPS because they did not reflect typical DLD transaction requests. There were only 413 transactions with Request Method Other in the CY 2010 DLS data. The Volume Dataset was used to calculate Request Method volume which is the number of initiated transactions per Request Method. The Volume Dataset had 5,816,158 initiated transaction records.

FIELD TRANSACTION DATASETS

Two Field Transaction Datasets with initiated transactions from Field offices were created from the Volume Dataset: The Field Usage Dataset and the Field Processing Time Dataset. Field offices will be referred to as DLOs throughout this report. It was necessary to create two Field Transaction Datasets because only completed transactions had completion times. Completion times were necessary for all transaction processing time analyses. Therefore, the Field Usage Dataset was created for all analyses not requiring transaction processing times and the Field Processing Time Dataset was created for all processing time analyses. Specific DLOs and all of their transactions were removed from the two Field Transaction Datasets. Cooper, Emory, Elgin, Giddings, Lockhart, George West, Refugio, and Tilden DLOs had no DLS rollout dates in the DLD Sites Spreadsheet. However, the DLS data contained transactions for these DLOs with valid time stamps. These transactions were not batch processed by the DDL system. The transaction data for these DLOs were inconsistent with the official DLS roll out schedule. As a result, these transactions were removed from the two Field Transaction Datasets. The Pittsburg DLO transaction data covered only five days in CY 2010. DLS was never officially rolled out and the office was closed in June 2010. These transactions were removed. Katy transactions were removed because the office was not open during 2010 and had an unknown closure date. Transactions from Headquarters in Austin were also removed because the office was atypical and did not reflect operations of a standard DLO (Table 1).

FIELD USAGE DATASET

The Field Usage Dataset included initiated transactions with the Request Method Field and a valid site code. Site codes are numbers assigned to DLOs. 9,546 initiated transactions without a valid site code were excluded. Note: Mobile Offices that used the DDL system were aggregated using site codes 690

Table 1. DLOs with excluded transactions in the Field Usage and Field Processing Time datasets.

DLOs with Excluded Transactions	Number of Total Transactions in Dataset	Percentage of Total Transactions in Dataset
Cooper, Emory*	183	0.0038%
Pittsburg	27	0.00057%
George West, Refugio, and Tilden*	409	0.0086%
Elgin, Giddings, and Lockhart*	643	0.014%
Katy	4,135	0.087%
Headquarters	3,301	0.069%

**Transaction data for DLOs were grouped in the DLS data.*

and 691 and were analyzed together. Mobile Offices are offices without secure, permanent locations that require equipment to be transported to the site and set-up prior to beginning service for the day. Every Mobile DLO has a Home Base DLO from which an FTE travels to operate the Mobile DLO.

The Field Usage Dataset was used to calculate Workload Snapshots, transaction volume by operational hour and employee hour, and additional geographic analyses for DLOs. The Field Usage Dataset had 4,736,009 useable initiated transaction records.

FIELD PROCESSING TIME DATASET

The Field Processing Time Dataset was extracted from the Field Usage Dataset and included only transactions with transaction status Complete (not Cancelled or In Progress). All transactions included in the dataset had identical start and end dates and transaction processing times greater than zero seconds. Combination transactions were removed from the Field Processing Time Dataset because their transaction processing times were inconsistent and could not be compared among other transaction types. A Combination transaction is a transaction initiated for a customer with a DL and an ID. A change common to both cards, such as an address change, affects both cards and results in two transactions that are combined in the DLS.

To remove statistical outliers in the Field Processing Time Dataset, transaction processing time was analyzed by transaction type. Transaction types included in the DLS data were Duplicate ID, Duplicate DL, Original ID, Original DL, Renewal ID, Renewal DL, Modify DL, Deferred Test, and Comprehensive Test. If the transaction processing time,

the time elapsed between the initiation and completion of a transaction, was outside the range of three standard deviations from the average processing time of its transaction type, the transaction was removed from the dataset. Deferred Test and Comprehensive Test transaction types were removed because of the limited volume of these transactions and because the components of the two tests varied across drivers. As a result of this variation, it was not possible to create a desired or standard processing time for Deferred and Comprehensive Tests. The Field Processing Time Dataset was used for all calculations involving transaction processing time. The Field Processing Time Dataset had 3,559,407 completed transaction records.

ANALYSES

Analyses were conducted in five phases.

1 Phase One was an exploration of transaction data and DLO information provided by TxDPS. Exploration included Workload Snapshots and transaction volume and processing time calculations.

2 Phase Two analyzed customer demand by modeling statewide potential demand and regional FTE reallocations.

3 Phase Three determined potential Mega DLO locations and statewide DLO staffing recommendations.

4 Phase Four examined potential DLO closures.

5 Phase Five was a combination of multiple additional analyses including: transactions initiated by 15- to 19-year-olds, offices with late-day closures, Internet transactions and connectivity, driver education, and model and risk employees.

PHASE ONE: DATA AND STATISTICS

WORKLOAD SNAPSHOTS

Statewide and regional workload snapshots were statistics generated to understand transaction volume. Statewide and regional workload snapshots are initiated transaction volume calculations by day, week, month, and year. The DLS data included descriptors that were used to further classify transactions. Transaction volumes were calculated using the descriptors: Correction No Fee, Temporary Visitor, and Out-of-State Transfer (Table 2). A Correction No Fee descriptor indicated that a transaction was initiated to correct a DL/ID photo or signature that did not pass quality assurance standards. The customer is not charged for the Correction No Fee transaction. A transaction with a Temporary Visitor descriptor indicated that a DL/ID transaction was initiated for a customer that was not a U.S. citizen or lawful permanent resident, a Temporary Visitor.

Table 2. Analysis level for descriptive statistics and workload snapshots.

Statistics	Analysis Level
Request Method Frequency	Statewide and Regional
Initiated Transaction Status	Statewide and Regional
Correction No Fee	Statewide and Regional
Temporary Visitor as Percent of Total State Transactions	Statewide and Regional
Out of State Transfers	Statewide and Regional
Initiated Transaction Type Frequency	Statewide and Regional
Initiated Transactions by Month (workload snapshot)	Statewide and Regional
Initiated Transaction Types by Month (workload snapshot)	Statewide and Regional
Initiated Transactions by Day (workload snapshot)	Statewide and Regional
Initiated Transaction Type by Hour (workload snapshot)	Statewide
Completed Transaction Processing Times	Statewide
Temporary Visitor as Percent of Total Monthly Transactions	Statewide
Transactions by Driver License Office	Individual DLOs

The transactions require valid documentation that confirms temporary admission to the United States. A transaction with an Out-of-State Transfer descriptor indicated an ID/DL transaction that was initiated by a customer with a valid ID/DL from another U.S. state.

24,764 (.5%) of DLO initiated transactions did not have a region code and were removed from all DLD Region workload snapshot analyses.

Command syntax is the language, or code, behind statistical operations in SPSS. It was created and saved for SPSS workload snapshot calculations to ensure the reproducibility of analyses, stream-line repetitive tasks, handle complex data manipulations and analyses, and provide documentation of methodology for quality control and validation.

USAGE AND PROCESSING FACTORS

DLO and FTE Usage Factors were calculated statewide, by region, site code, office size, and office type. DLO Usage Factors were calculated using total hours open in CY 2010 (Operational Hours) and initiated transaction volumes. FTE Usage Factors were calculated using the total number of hours worked by FTEs at a DLO (Employee Hours) and initiated transaction volume.

DLO and FTE Processing Factors were also calculated statewide, by region, site code, office size, and office type. DLO Processing Factors were calculated using Operational

Hours and total transaction processing time. FTE Usage Factors were calculated using Employee Hours and total transaction processing time.

OPERATIONAL AND EMPLOYEE HOUR CALCULATIONS

Operational Hours

Operational Hours were calculated from hours of operation in the DLD Field Directory provided to the GPP from TxDPS.

Operational Hours = (hrs open per day*) x (number days open per year)

**Accounts for days with late closures and part-time schedules.*

Employee Hours

Employee Hours were calculated using the total number of assigned FTEs, total number of FTEs shared between offices (Mobile Offices and Home Bases), and the total possible Employee Hours in 2010. If a DLO closed in 2010, only open days were used in the calculation of total possible Employee Hours. Vacation time and sick leave were not considered because the data were not available.

Total possible Employee Hrs in 2010 for an FTE: (251 work days (excludes holidays)) x (8 hrs/day) = 2008 hrs

Employee Hours for Full-time Offices: The Employee Hours for offices open full-time (Operational Hours greater than or equal to 2008 hours per year) were calculated by multiplying assigned FTEs by 2008 hours. This assumes that no FTEs worked overtime.

Example:
10 FTEs x 2008 hrs = 20,080 Employee Hrs

Employee Hours for Part-time Offices: The Employee Hours for offices open part-time (less than 2008 hours per year) were calculated by multiplying assigned FTEs by the Operational Hours.

Example:
2 FTEs x 1000 Operational Hrs = 2000 total Employee Hrs

Employee Hours for Mobile and Part-time Offices (Offices with no assigned FTE): The Employee Hours for offices with no assigned FTEs (primarily Mobile Offices) were calculated by multiplying the number of FTEs sent from the Home Base DLO by the Operational Hours of the Mobile or Part-time DLO. These hours were subtracted from the Mobile or Part-time DLO's Home Base Employee Hours when the Home Base's Operational Hours were 2008 or more. If the Home Base's Operational Hours were less than 2008, the hours were not subtracted. These calculations account for two scenarios:

(1) Home Base Offices that only had one FTE and had to close on scheduled days to staff the Mobile Office. (2) Home Base Offices with more than one FTE assigned that did not have to close on scheduled days to open a Mobile DLO at another location.

DLS Employee Hours

As mentioned in the Data Validation and Data Preparation section, only transactions initiated at a DLO after the DLS rollout had time stamp data that could be used for transaction processing time calculations. Employee Hours for each DLO were prorated to reflect total employee hours since the DLS rollout at each DLO and were used to calculate Field Processing Time by Operational and Employee Hour.

CALCULATING DLO AND FTE USAGE FACTORS

The Field Usage Dataset was used to calculate initiated transaction volume. Initiated transaction volumes were used to calculate DLO and FTE Usage Factors. Both Factors were calculated statewide, by region, site code, office size, and office type.

DLO Usage Factor
= 2010 initiated transaction volumes ÷ 2010 Operational Hrs

FTE Usage Factor
= 2010 initiated transaction volumes ÷ 2010 Employee Hrs

CALCULATING DLO AND FTE PROCESSING FACTORS

The Field Processing Time Dataset was used to calculate field transaction processing time by subtracting the transaction start time stamp from the end time stamp. Field Processing times were averaged statewide, by region, site code, office size, and office type.

DLO Processing Factor
= 2010 transaction processing time ÷ 2010 DLS Operational Hrs

FTE Processing Factor
= (2010 transaction processing time ÷ 2010 DLS Employee Hrs) x 100

The FTE Processing Factor was the only Factor that was transformed into a percent by multiplying by 100. This was done because the FTE Processing Factor is best understood and usable as a percent. For example, a value of 0.16 would mean that 16% of an FTE's time was spent processing transactions.

PHASE TWO: CUSTOMER DEMAND

MAPPING DRIVER LICENSE OFFICES AND CUSTOMER ZIP CODES

A total of 306 DLOs were geocoded, assigned latitude and longitude coordinates, for mapping and analysis purposes. 238 DLOs were geocoded automatically using the ArcGIS geocoding tool, 17 DLOs were

geocoded using the Pick Address from Map tool, and 51 DLOs were manually geocoded through the identification of geographic coordinates using aerial imagery.

DLS transaction data included customer ZIP codes. The ZIP codes reflected the customer's mailing address. There are two types of ZIP codes: ZIP codes corresponding to a geographic area and ZIP codes corresponding to a geographic point (such as a post office containing P.O. boxes). All point ZIP codes were reassigned to the area ZIP codes that contained them. These point ZIP codes were reassigned to better represent the geographic areas customers drove from to complete a transaction at a DLO. The population-weighted centroid of each area ZIP code was calculated using ArcGIS. A population-weighted centroid is the center of a set of features where the population of each feature pulls the centroid toward the areas with the highest population. The population-weighted centroid is placed at the location of the shortest average distance from all populations in the area. Census block groups were used to find the population weighted centroids of ZIP codes. A census block group is a geographic unit used by the U.S. Census Bureau to report demographic data (U.S. Census Bureau 2011). A census block group is the smallest geographic unit with demographic data broken down by age. DLS transaction data were combined with the population-weighted centroids.

MODELING STATEWIDE POTENTIAL DEMAND

To visualize the spatial distribution of potential customer demand, Business Analyst extension was used to model geographically optimal office locations. Each Optimal Office Location Model used one of three populations to place offices. The populations used were 2010 Weighted Population, 2015 Weighted Population (projected), and 2010 Employee Population (where Texans work). These populations are referred to as the Analysis Populations throughout this report. The Analysis Populations represented customer demand and considered where people lived, where they are predicted to be living in 2015, and where they worked. The 2015 population was important because decisions must be made that look towards the future. The employee population was important because some customers who visited DLOs likely visited the DLO closest to their work instead of the location closest to their home. The 2010 and 2015 weighted populations were created using data obtained from Business Analyst. The 2010 employee population was also obtained from Business Analyst data package and showed where Texans worked. Each population was associated with a census block group.

The 2010 and 2015 populations were weighted by the propensity of customers to initiate a transaction at a DLO in 2010 (ini-

tiated transaction rates), and the likelihood for customers to initiate a transaction more than once in the same year (repeat initiated transaction rates). Initiated transaction rates and repeat initiated transaction rates were calculated by Region and by five-year age groups (e.g. 15- to 19-year-olds) to account for geographic and demographic variation.

Initiated transaction rates were calculated for each DLD Region by dividing the volume of initiated transactions for a given age group at a DLO in 2010 by the respective age group's 2010 population. Initiated transaction volumes included only the first transaction that was initiated by each customer in 2010. The regional initiated transaction rate for each age group was applied to every census block group within that region. For example, 25- to 29-year-olds with a regional initiated transaction rate of 20% applied to a block group with a 25- to 29-year-old population of 100 resulted in a weighted population of 20 for that age group. Figure 2 shows the variation between Regions 2A and 4 to highlight the importance of calculating initiated transaction rates by Region and age group.

Repeat initiated transaction rates were calculated for each DLD Region and each age group by dividing the volume of initiated transactions for customers who had already initiated a transaction at an earlier time (including 2nd, 3rd, 4th transactions, etc.) by

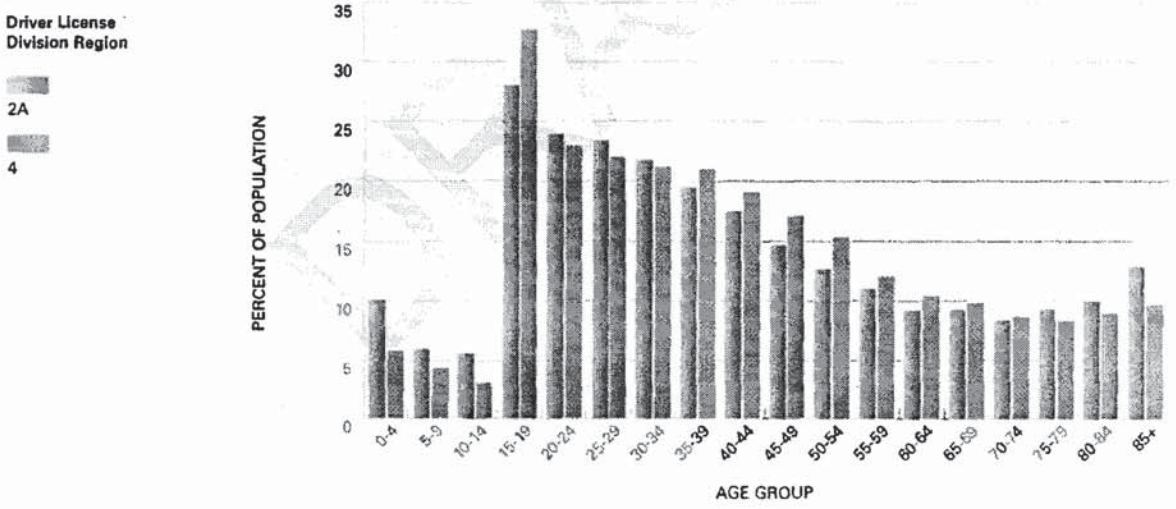


Figure 2. Initiated transaction rates for five year age groups for Driver License Division Regions 2A and 4. The variation between the two regions highlights the importance of weighting population by DL Region and age group.

the volume of initiated transactions calculated above. For example, if the same age group in the census block group described above had a 50% repeat initiated transaction rate, the weighted population would be increased from 20 to 30. Figure 3 shows the variation of repeat initiated transaction rates for Regions 2A and 4. The 2010 employee population was not weighted because it was not available in five-year age groups.

There were two primary assumptions when populations were weighted. It was assumed that regional initiated transaction and repeat initiated transaction rates calculated for 2010 will remain constant. Further, it was assumed that regional initiated transaction and repeat initiated transaction rates for each region could be equally applied within that particular region.

The 2010 weighted population, 2015 weighted population, and the 2010 employee population Optimal Office Location models each placed 226 statewide optimal office locations (the existing number of DLOs at the time of analysis). The placement of these optimal office locations was a function of the density and distribution of the Analysis population being used. The optimal office location model used a spatial clustering algorithm. The spatial clustering algorithm was a mathematical operation that found geographic centroids of population

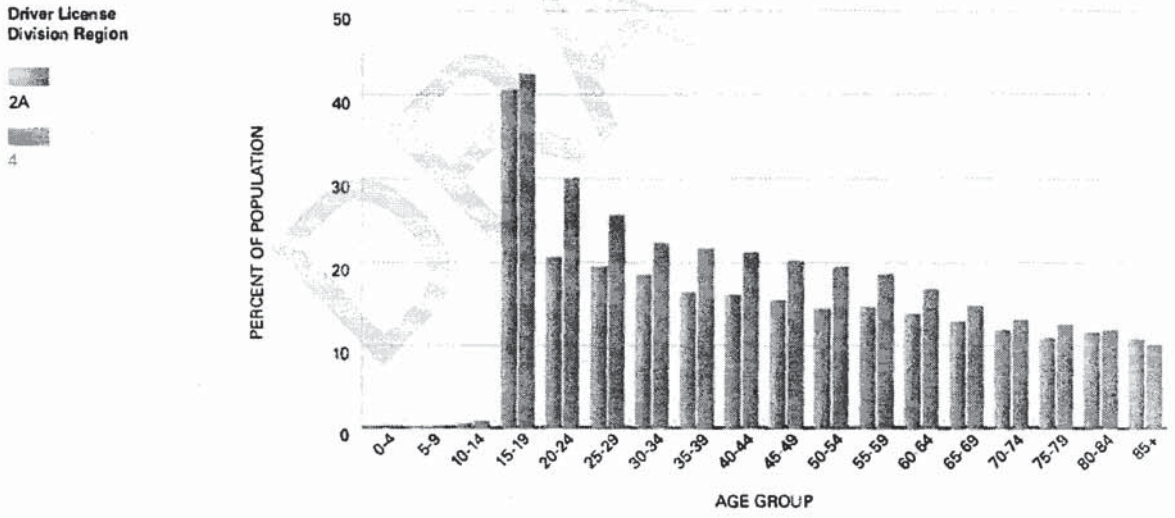


Figure 3. Repeat initiated transaction rates for five year age groups for Driver License Division Regions 2A and 4. The variation between the two regions highlights the importance of weighting population by DL Region and age group.

density and distribution and placed offices as near to these centroids as possible (Figure 4) while accounting for the placement of other optimal office locations. Population densities and distributions were represented by points at the population weighted centroids of census block groups. The spatial clustering algorithm operated randomly by design. Therefore, each simulation placed optimal office locations in a different geographic order. Each modeled optimal office location affected and was affected by every other modeled optimal office location; the greater the number of offices and larger the geographic area being modeled, the greater the variation between simulations. Modeling 226 optimal office locations across the state of Texas introduced variation. To address the variation, 100 model simulations were run using each of the three populations (300 total simulations). The number of modeled offices placed in each DLD Region was summed for each simulation. For each population's 100 simulations, the average number of modeled offices placed in each DLD Region was calculated. The deviation of each model from the average was calculated. The model simulation for each population that least deviated from the average was chosen as the "best fit" model. This resulted in three optimal office location models, one for each population used. All three models were used in further analyses.

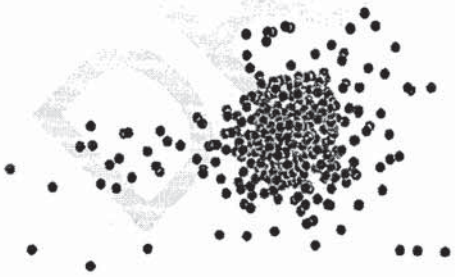


Figure 4. The Optimal Office Location Model used a spatial clustering algorithm. The gray triangle is the optimal office location calculated using the population represented by the red dots.

REGIONAL FTE REALLOCATION

All three Analysis Populations were individually summed for each DLD Region. To equitably reallocate FTEs, percent of statewide customer population was calculated for each DLD Region by dividing the summed Regional Analysis Populations by the three respective Statewide Analysis Populations. The percent of statewide customer population for each DLD Region was multiplied by 1011 (the existing number of statewide FTEs) to determine the equitable number of FTEs a DLD Region should be allocated. For example, if one of the Analysis Populations within a DLD Region was 1,000,000 which equaled 15% of the state's Analysis Population, the DLD Region would be model-reallocated 15% of the state's FTEs. With a statewide pool of 1011 FTEs, this DLD Region would be model-reallocated 151.7 FTEs.

Regional FTE Reallocation calculations were compared to regionally summed Optimal Office Location Model results.

OPTIMAL OFFICE LOCATION CONFLUENCES

Optimal office location "best fit" models for each Analysis Population placed 226 office locations for a total of 678 (226 offices x 3 models) modeled office locations. To interpret and simplify the modeled optimal office locations, areas where modeled offices came together, or had a confluence, were identified. Three types of confluences were identified (Table 3). The confluences were identified within the radius of a circle. All confluences in urban areas had a radius of five miles or less and all confluences in rural areas had a radius of 15 miles or less.

The first two confluence types identified modeled optimal office locations near existing DLOs. The first type, Three-Model Confluence, identified instances where one 2010 Weighted, one 2015 Weighted, and one 2010 Employee Population Modeled Optimal Office Location was placed near an existing office. The second type, Two-Model Confluence, identified instances where one 2015 Weighted, and one 2010 Weighted or 2010 Employee Population Modeled Optimal Office Location was placed near an existing office. The inclusion of a 2015 Weighted Modeled Optimal Office Location in the Two-Model Confluence was important because this population is most useful in guiding recommendations for the future. The Three-Model Confluence and Two-Model Confluence types identified existing DLOs serving the population demand indicated by the modeled optimal office locations. The

Table 3. Optimal Office Location Confluence type descriptions.

Confluence Type	Description	Radius	
		Urban	Rural
Three Model Confluence	• **One 2010** Weighted Population Model • **One 2015** Weighted Population Model • One 2010 **Employee** Population Model • Near an existing Driver License Office	**<5 miles**	**<12 miles**
Two Model Confluence	• One **2015** Weighted Population Model • One **2010** Weighted Population Model **OR** One 2010 **Employee** Population Model • Near an existing Driver License Office		
Three Model Confluence without an existing Driver License Office	• One **2010** Weighted Population Model • One **2015** Weighted Population Model • One 2010 **Employee** Population Model		

third type of confluence, Three-Model Confluence without an Existing DLO, identified the same three types of population modeled optimal office locations as the Three-Model Confluence but in areas without an existing DLO. To further simplify the Three-Model Confluences without an Existing DLO, a single point was placed in the center of each confluence. These points symbolized customers that were potentially not served by existing offices. These points were called Statewide Points of Demand (Figure 5).

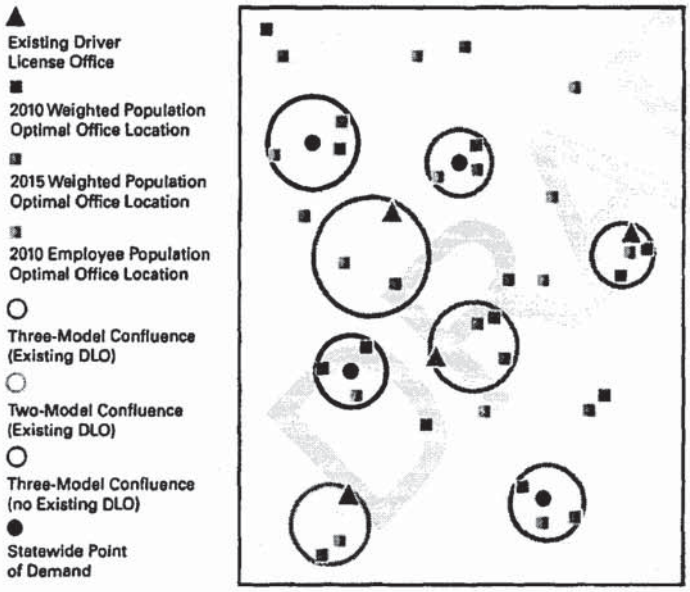


Figure 5. Three types of Modeled Optimal Office Location Confluences were identified. Statewide points of demand were placed in the center of Three-Model Confluences without an Existing DLO and symbolized customers that were potentially not served by existing DLOs.

PHASE THREE: DRIVER LICENSE OFFICE RECOMMENDATIONS

THE FTE MODEL

A series of analyses were combined to create a model for determining equitable FTE allocations for DLOs. The FTE Model consisted of three primary steps: creation of DLO service areas, assignment of customer population to DLO service areas, and FTE allocation for DLOs using the assigned customer population.

Business Analyst was used to create Thiessen Polygons, or service areas, for DLOs. Thiessen Polygons are polygons created using the distance between analysis points. The boundary lines of each Thiessen Polygon are equidistant between analysis points. In other words, every location within a Thiessen Polygon is closer to its assigned analysis point than any other analysis point.

As discussed in the Modeling Potential Statewide Demand for DLD Services section, the Analysis Populations were associated with census block group population weighted centroids. All centroids were assigned to the Thiessen Polygon that contained them and the Analysis Populations associated with each centroid were summed. The summed Analysis Populations for each Thiessen Polygon were assigned to its corresponding DLO (Figure 6).

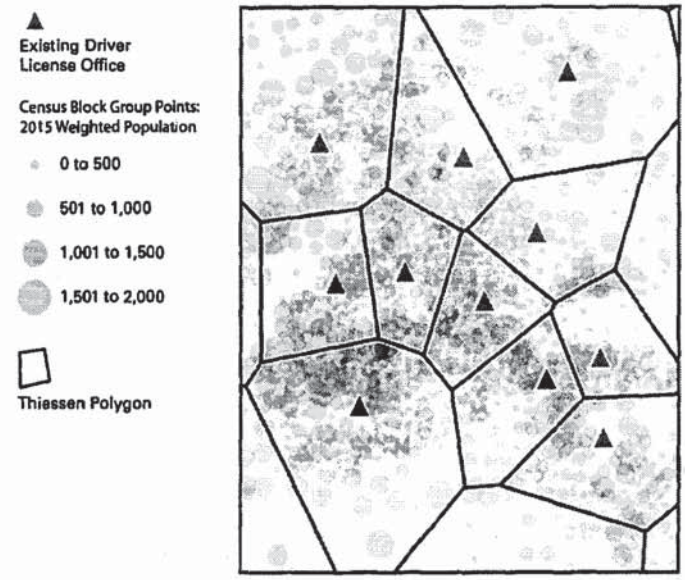


Figure 6. Customer Population was assigned to Thiessen Polygons (service areas) that were created for DLOs to calculate equitable FTE reallocations.

To calculate equitable FTE allocation, percent of statewide customer population was calculated for each DLO by dividing the three statewide Analysis Populations by the corresponding Analysis Populations assigned to each DLO. The percent of statewide customer population for each DLO was multiplied by 1248 (existing number of statewide FTEs + 250 additional statewide FTEs) to determine the equitable number of FTEs a DLO should be allocated. For example, if the customer population for the 2015 weighted population within a DLO Thiessen Polygon was 150,000 which equaled 2.5% of the state's weighted population, the DLO would be assigned 2.5% of the state's FTEs. With a statewide pool of 1248 FTEs, this DLO would be allocated 31.2 FTEs.

When using the FTE Model for analyses, some DLOs were omitted. These DLOs included Fort Hood, Fort Bliss, Austin-Denson, and Austin-Capitol because they serve specific populations such as military personnel. The Dallas-Downtown office was also removed because it is a walk-up office with six FTEs and cannot be expanded. Since Dallas-Downtown is located in the center of a dense urban core, the model would have reallocated more FTEs than could physically fit in the office. These omitted DLOs had a total of 13 existing FTEs.

The FTE Model had several constraints. (1) Service areas (Thiessen Polygons) assumed that customers will visit the DLO closest to their residence. (2) The Analysis Populations were weighted using only one year of transaction data (CY 2010). If transaction data from CY 2010 did not reflect long term DLD customer trends, population weighting may not be an ideal representation of DLD customers. (3) The potential impact on customer behavior that a new Mega DLO will have was unknown (e.g. will customers be more or less likely to visit a new Mega DLO?). (4) Additional lease cost, economic, social, and political considerations were not able to be used as parameters to constrain the model.

MEGA DRIVER LICENSE OFFICE ANALYSIS

All Mega DLO location and staffing analyses and recommendations strived to fulfill the improvements outlined in the *What Will It Take to Fix Driver License?* report. TxDPS DLD proposed the opening of six Mega DLOs in the *What Will It Take to Fix Driver License?* report and the addition of 250 FTEs to reduce wait times at existing DLOs. Mega DLOs are defined as offices with 25 or more FTEs.

The six potential Mega DLOs were proposed in what will be referred to as Mega Urban Areas. The Mega Urban Areas were Austin, San Antonio, DFW, and Houston. Modeled Optimal Office Location results, initiated transaction volumes, and FTE reallocations were compared to evaluate customer demand in the Mega Urban Areas and their respective DLD Regions. These measures were used to determine the most equitable distribution of the six Mega DLOs across the four Mega Urban Areas.

To begin Mega DLO analysis, study areas were established for the Mega Urban Areas. Next, Mega Urban Area Points of Demand were established using the results of the Optimal Office Location Model.

Multiple FTE Model simulations were completed to (1) find potential Mega DLO locations based on weighted populations and (2) equitably distribute FTEs to potential Mega DLOs and existing DLOs. The results of model-reallocated FTE distributions were modified into FTE Assignments to meet the needs of TxDPS as outlined in the *What Will It Take to Fix Driver License?* report.

MEGA URBAN STUDY AREAS

Initial study areas were established for the Mega Urban Areas and, based on feedback from DLD regional managers, were adjusted to reflect the knowledge each manager had of their DLD Region. Mega Urban Study Areas included both the Mega Urban Areas and surrounding suburban locations.

MEGA URBAN AREA POINTS OF DEMAND

Points of Demand were established for the Austin, San Antonio, DFW, and Houston Mega Urban Study Areas. Modeled FTE reallocations were summed to find the maximum number of Mega DLOs that could be staffed within each of the Mega Urban Study Areas if they were a clean-slate and no existing DLOs were present. For example, if a Mega Urban Study Area was reallocated 50 FTEs using the 2010 Weighted Population, and all existing DLOs were ignored, the FTEs in the Mega Urban Study Area could staff two Mega DLOs.

Using the maximum number of Mega DLOs within each of the four Mega Urban Study

Areas, five Optimal Office Location Model simulations were completed for each of the three Analysis Populations in each Mega Urban Study Area (15 total for each study area). Confluences of the Modeled Optimal Office Locations were identified for each Mega Urban Study Area. The confluences were simplified into Mega Urban Area Points of Demand, similar to Statewide Points of Demand.

After the Mega Urban Area Points of Demand were determined, the locations of existing DLOs were considered because no existing DLOs could be considered for closure in the Mega Urban Study Areas at the time of analysis, at the request of TxDPS. Mega Urban Area Points of Demand located near an existing DLO were not considered as potential Mega DLO locations. The only Statewide or Mega Urban Area Points of Demand that were considered were points that occurred in areas where there was customer demand and no existing DLO.

POTENTIAL MEGA DLO MODEL SIMULATIONS

Multiple combinations of existing DLOs, Statewide Points of Demand, and Mega Urban Area Points of Demand were created. Thiessen Polygons were created for each combination of existing DLOs, Statewide Points of Demand, and Urban Area Points of Demand. Population within a given Thiessen Polygon was summed and was used to calculate equitable FTE reallocations.

FTE Reallocation

FTEs were reallocated for all Thiessen Polygon simulations using 1248 FTEs. The number 1248 was determined from the formula:

1011 (existing statewide FTEs) - 13 (FTEs from omitted DLOs) + 250 (additional statewide FTEs)

Statewide and/or Urban Area Points of Demand were either eliminated, retained, or slightly adjusted based on how FTE reallocation stabilized or destabilized existing DLOs. The terms stabilized and destabilized describe the difference between the existing number of FTES and the reallocated number of FTEs at a DLO. A stabilized DLO was a DLO that was model-reallocated exactly or close to their number of existing FTEs. The simulations were conducted multiple times to find the solution that best stabilized FTE allocations at existing DLOs and created Mega DLOs that would positively impact the greatest number of customers. For example, a Statewide Point of Demand north of Austin was combined with the existing DLOs in the area, Thiessen Polygons were created, and FTEs were model-reallocated. After the results were documented and compared, this Statewide Point of Demand was removed and a Mega Urban Area Point of Demand was added. This process was repeated in all Mega Urban Areas until multiple potential Mega DLO locations were determined for the Austin, San Antonio, DFW, and Houston Mega Urban Study Areas.

POTENTIAL MEGA DLO LOCATIONS

Final potential Mega DLO locations were recommended for Austin (one Mega DLO) and Houston (two Mega DLOs). However, two potential Mega DLO location scenarios were presented to TxDPS for both San Antonio and DFW. The scenarios for San Antonio and DFW were presented with maps and model-reallocated FTEs for TxDPS to select the scenarios that best met their needs. The scenarios chosen for San Antonio and DFW by TxDPS are presented in the Results and Discussion section.

SEARCH AREAS

Certain realities were unable to be included in the model, such as available lease space and the potential unfeasibility of the exact recommended potential Mega DLO locations because of data limitations. Therefore, a search area with a three-mile radius was provided for each Mega DLO location recommendation within a five-mile buffer. The centers of the five-mile buffers are the ideal locations for the Mega DLOs. The three-mile search area was not always centered on the ideal location. Instead, it directed the search for potential Mega DLO locations toward areas of high customer demand.

RECOMMENDED FTE ASSIGNMENTS

After final Mega DLO locations were identified, FTE Assignment recommendations were determined. FTE Assignments considered model-reallocated FTEs, DLO FTE carrying capacities (number of FTEs that could be physically accommodated in a DLO), existing FTE allocations, and to meet the needs of TxDPS. FTE Assignment recommendations included the 250 additional statewide FTEs.

FTE DISPARITY

A hierarchy of FTE Disparity was determined for each existing DLO and potential Mega DLO. Each DLO's FTE disparity was calculated using the following formula:

FTE Disparity
= (Existing FTEs) - (Model-Reallocated FTEs)

An FTE Disparity less than zero indicated that a DLO's number of model-reallocated FTEs was greater than their existing number of FTEs. This indicated FTE Need in that DLO. For example, if an office had eight existing FTEs, but was model-reallocated 10 FTEs, the FTE Disparity for that office would be -2.0. In other words, the office needed 2 FTEs to be equitably allocated FTEs based on the population of potential customers in its service area. Offices with a disparity of zero FTEs were considered equitably allocated. This means that their reallocated FTE number was the same as their current FTE number. An FTE Disparity greater than zero indicated that a DLO's number of model-reallocated FTEs was less than their existing FTE allocation. This indicated FTE Surplus.

EXISTING FTES

To minimize disruption to the DLD and its employees, FTE Assignments began with the initial assumption that no existing DLO could lose FTEs. Therefore, every DLO began the FTE Assignment process with their existing number of FTEs and ended the process with no fewer than their existing number of FTEs.

POTENTIAL MEGA DLO FTE ASSIGNMENT

Initially, each potential Mega DLO had an existing FTE allocation of zero. Each potential Mega DLO was model-reallocated FTEs. By definition, a Mega DLO is allocated 25 or more FTEs. Considering the request of establishing six Mega DLOs and the definition of a Mega DLO, each of the six potential Mega DLOs was assigned 25 FTEs (150 total) to begin the FTE Assignment process. With 150 FTEs assigned to the six Mega DLOs, 100 FTEs remained to be assigned to other DLOs.

FTE ABSORPTION

No existing DLOs could be physically expanded due to economic and structural constraints. However, some DLOs could absorb additional FTEs. The number of FTEs that a DLO could absorb was FTE Absorption. Existing FTEs and Carrying Capacities were used to calculate FTE Absorption. Carrying Capacity, the total number of FTEs that a DLO could physically accommodate, was provided by regional managers for every DLO. The FTE absorption number for each DLO was determined using the following formula:

FTE Absorption
= (Carrying Capacity) – (Existing FTEs)

DLOs with a positive FTE Absorption number could be assigned more FTEs. DLOs with an FTE Absorption number of zero were at capacity and could not be assigned any more FTEs. No DLOs had a negative FTE Absorption number because Carrying Capacity was never less than the number of existing FTEs.

FTE ASSIGNMENT

FTEs were assigned to DLOs in a stepwise manner based on FTE Need and FTE Absorption. DLOs with the greatest FTE need took precedence over DLOs with a lower need. For example, if Office A had an FTE need of -10 (under allocated 10 FTEs) and Office B had an FTE need of -5, Office A would receive 5 FTEs from the remaining 100 available FTEs before Office B would receive an FTE. As high need DLOs with FTE absorptions greater than zero received FTEs, they were iteratively moved down the list and the DLO next on the list gained an FTE. At most, only one FTE was assigned to a DLO at a time to ensure the most equitable

distribution of FTEs to all DLOs. However, at this stage DLOs often received a portion of an FTE instead of a whole FTE. A portion of an FTE would be a part-time employee.

If an office was at the top of the FTE Need list but was unable to absorb any FTEs due to limited absorption capacity, FTEs were assigned to a nearby DLO, whenever possible. All nearby DLOs that received FTEs were within 20 miles of the DLO that could not absorb FTEs. If the nearby DLO was over allocated as a result of starting the FTE Assignment process with its existing number of FTEs (despite being model-reallocated fewer FTEs), the FTE(s) was subtracted from the FTE over allocation instead of an FTE being assigned the DLO. For example, if Office A was over allocated by three FTEs and was absorbing one FTE from an office that was unable to absorb FTEs (Office B), the new over allocation for Office A was two. The number of Assigned FTEs in Office A only surpassed the number of existing FTEs after the over allocation of three FTEs was accounted for. In other words, since both offices are near each other, the under allocation of Office B is balanced by the over allocation at Office A. This same process was applied when the DLO that could absorb FTEs was a potential Mega DLO. If a potential Mega DLO was model-reallocated less than 25 FTEs, the number of Assigned FTEs only surpassed 25 after the over allocation was accounted for by FTEs from nearby DLOs. For example, if a Mega DLO was model-reallocated 20 FTEs and absorbed two FTEs from a nearby existing DLO, those two FTEs were subtracted from the over allocation of five FTEs (that resulted from the Assignment of 25 FTEs at the beginning of the process) for a new over allocation of three FTEs. If a DLO with an FTE Need could not absorb any more FTEs and there were no existing DLOs or Mega DLOs nearby that could absorb them, that DLO was removed from the need list and identified as unable to have its FTE needs accommodated.

The process of assigning FTEs was repeated until all 100 FTEs were assigned to DLOs.

PHASE FOUR: POTENTIAL DRIVER LICENSE OFFICE CLOSURES

Potential DLO closures were identified that could be implemented in the future to make more resources available to DLOs with greater customer demand. These potential closures were selected using five criteria. The criteria were designed to isolate DLO whose closures would minimize disruption to customers. Each criterion was applied to every DLO and when a criterion was fulfilled the office was given a score of one. If a criterion was not met, the DLO was given a score of zero. The scores were totaled (with a maximum score of five) and used as a guide for potential closures. A higher score supported keeping an office open.

The five criteria were:

1 Drive time to the next closest DLO. Average customer drive time for every DLO was calculated using ZIP code population weighted centroids. The longest average customer drive time for any one DLO was 52 minutes. The drive time between DLOs was calculated and any DLO with a drive time greater than 52 minutes to the next closest DLO was given a score of one for this criterion.

2 Greater than 1,000 initiated transactions in 2010. 1,000 initiated transactions is less than four initiated transactions per weekday. Any DLO with an initiated transaction volume greater than 1,000 was given a score of one for this criterion.

3 County population (total persons residing within a county) greater than 10,000. In a few cases, a county with a DLO is surrounded by counties without DLOs. In these cases, the population of the surrounding counties was included in the population count. Any DLO in a county with a population greater than 10,000 was given a score of one for this criterion.

4 County population growth from 2000-2020 greater than 10,000. Population growth was an indication of increasing demand. Any DLO in a county with population growth from 2000-2020 greater than 10,000 was given a score of one for this criterion. Note: population growth between 2010 and 2020 is a projection (Texas State Data Center 2011).

5 The presence of a Modeled Optimal Office Location Confluence. Modeled Optimal Office Location Confluences indicated potential demand. Any DLO in a Two or Three-Model Confluence was given a score of one for this criterion.

A DLO that met four or more criteria would not be recommended as a potential closure. A DLO that did not meet any of the five criteria would be recommended for potential closure. DLOs with scores ranging from one to three were examined on a case-by-case basis as a potential closure. Potential office closures were divided into two groups: Tier 1 and Tier 2 closures. Based on the five criteria, Tier 1 potential closures would cause less disruption to customers, if closed, than Tier 2 potential closures.

In some cases, where the criteria did not provide enough information to make a potential closure recommendation, a Spider Diagram Analysis was used to assess where customers were traveling from to use DLO services. The Spider Diagram tool in Business Analyst used DLS ZIP code data (described in the Mapping Driver License and Customer ZIP Codes subsection) to draw lines between

customers and the DLO where a transaction was initiated. The lines represented the spatial distribution of customers and distances traveled to DLOs. The lines were symbolized to represent the volume of customers coming from each location. A thicker line indicated a larger volume of customers traveling from a ZIP code to a DLO. Analysis was limited to transactions with valid Texas ZIP codes. The lines were used to understand customer demand at rural offices in the context of office closures. Sometimes the criteria were not enough to make a recommendation for an office closure, particularly when two or more offices near each other met similar criteria. Using Spider Diagrams to visualize customer visitation patterns provided the information needed to make a recommendation that would have a negative impact on the least amount of people.

PHASE FIVE: ADDITIONAL ANALYSES

Several supplemental analyses, not directly connected to office recommendations, were performed on the 2010 transaction data. Supplemental analyses were performed for multiple reasons including special requests from TxDPS and additional tasks outlined in the Scope of Work.

TRANSACTIONS INITIATED BY 15- TO 19-YEAR-OLDS

TxDPS requested an analysis of transaction volume by office for 15- to 19-year-olds. The goal was to determine if the addition of Saturday hours would be beneficial in addressing the high volumes of initiated transactions by 15- to 19-year-olds. SPSS was used to determine the monthly percentage of initiated transactions by 15- to 19-year-olds out of all statewide initiated transactions.

LATE-DAY CLOSURES

TxDPS requested an analysis of transaction volumes at offices with late-day closures. For this analysis, an office with a late-day closure is defined as closing at 7:00pm. No office has a late-day closure more than two days per week. The request was made in response to anecdotal evidence from office managers that the volume of customers entering offices decreases from the five o'clock hour (5:00 pm-6:00 pm) to the six o'clock hour (6:00 pm-7:00 pm), suggesting a lack of demand during the six o'clock hour.

A unique dataset was created from the Field Processing Time Dataset. The dataset included only transactions completed on the days with a late-day closure in offices with late-day closures. For example, an office that closed late on Tuesday had only completed transactions from Tuesdays included in the dataset. The total number of transactions completed for all offices on late-day closure days was summed for every hour of the day from 7:00 am to 9:00 pm. The Field Processing Time Dataset contained a field that uniquely identifies the employee that processed an initiated transaction. Organizing the employees

by office and hour made it possible to know how many different employees were processing initiated transactions at a given time. The average number of employees that processed initiated transactions was calculated for every hour from 7:00 am to 9:00 pm. Of the completed transactions on late-day closures, the percent of completed transactions and the percent of average number of employees were calculated every hour from 7:00 am to 9:00 pm. The transaction and employee percentages were compared between the five o'clock hour and the six o'clock hour to evaluate the assertion by office managers that customer demand decreased during the last hour of the day on late-day closure days.

INTERNET TRANSACTIONS AND CONNECTIVITY

Internet transactions included all initiated transactions with Request Method TOL WEB. Internet transaction volumes were calculated by county. The transaction volumes were used to calculate the percentage of total statewide Internet transactions completed per county and the percentage of Internet transactions completed per county as a percentage of all initiated transactions with any Request Method. Three variables were used to describe Internet connectivity: number of people who had Internet access, number of people who used Internet daily, and number of people who made a purchase online within thirty days of data collection. Internet connectivity data by county were obtained from Business Analyst data package. A correlation analysis was completed to explore the relationship between Internet transaction volumes and connectivity.

TRANSACTIONS FOR TEMPORARY VISITORS

All initiated transactions for Temporary Visitors had Country of Origin data associated with them. The volume of initiated transactions for Temporary Visitors was determined by country using SPSS.

DRIVER EDUCATION

There are currently four types of driver education that can fulfill education requirements for a customer seeking an Original DL: parent taught driver education, commercial driver education, out-of-state equivalent driver education, and high school driver education. The Scope of Work called for analysis of driver education in correlation with transaction time and test failures. SPSS was used to run frequencies and descriptive statistics for driver education types prior to exploring relationships between transaction times and test failures. The results of the volume analysis, detailed in the Results and Discussion section, restricted additional analyses.

VISION, KNOWLEDGE, AND ROAD TESTS

Three types of tests are administered at DLOs: vision, knowledge (written), and road. The DLS Dataset contains information regarding the number of tests passed and/or

failed. Before the average number of tests passed/failed by transaction type were calculated, the test data were examined for any inconsistencies. The results of this examination restricted additional analysis and are detailed in the Results and Discussion section.

MODEL AND RISK EMPLOYEES

Model and risk employees were determined using three performance measures: total number of completed transactions; transaction processing time for each transaction type; and cumulative time to complete statewide initiated transaction volume. Each performance measure identified 10 model and 10 risk employees. A model employee ranked at the top of a performance measure and a risk employee ranked at the bottom. A total of 1,015 employees were included in the model and risk employee analyses.

MODEL AND RISK EMPLOYEES BY TOTAL NUMBER OF TRANSACTIONS COMPLETED

Each employee's total number of completed transactions was summed for the seven transaction types in the Field Usage Dataset. The employees with the most completed transactions were identified as the model employees and the employees with the fewest were identified as the risk employees.

MODEL AND RISK EMPLOYEES BY TRANSACTION PROCESSING TIME FOR EACH TRANSACTION TYPE

Average completed transaction processing times were calculated for all employees using the Field Processing Time Dataset in SPSS. The employees with the shortest and longest average processing times were identified for each of the seven transaction types. Model employees had the shortest processing times and risk employees had the longest.

MODEL AND RISK EMPLOYEES BY RANK OF CUMULATIVE TIME TO COMPLETE STATEWIDE TRANSACTIONS

The statewide initiated transaction volume for all transaction types was found. Each employee's average transaction time for each transaction type was multiplied by the statewide initiated transaction volume for each transaction type. The results were summed for each employee to find the total amount of time it would take each employee to complete all statewide initiated transactions. The employees that would complete the transactions in the shortest amount of time were identified as the model employees and the employees that would take the longest amount of time were identified as the risk employees.

3 Results & Discussion

The analyses completed on the 2010 DLS data included: workload snapshots, customer demand, Driver License Office recommendations (including potential Mega DLOs), potential Driver License Office closures, and additional analysis. The results and discussion of these analyses are detailed in this section.

PHASE ONE: DATA AND STATISTICS

WORKLOAD SNAPSHOTS

Workload snapshots (statistics to understand transaction volume) were completed statewide and regionally.

STATEWIDE

A total of 5,816,158 statewide transactions were included in the DLS transaction data for CY 2010 (excluding Request Method Other). Request Method volume revealed that 4,736,009 (82%) transactions were initiated in DLOs (Figure 7). Of the transactions initiated in DLOs, 93.5% had transaction status Complete (not Cancelled or In Progress) (Figure 8), 2.8% had a Correction No Fee descriptor, 1.9% were transactions for Temporary Visitors, and 4.7% were transactions for Out-of-State Transfers.

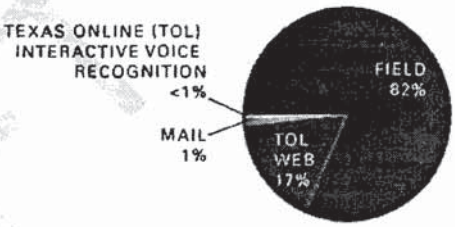


Figure 7. Driver License Division transaction request method rates.

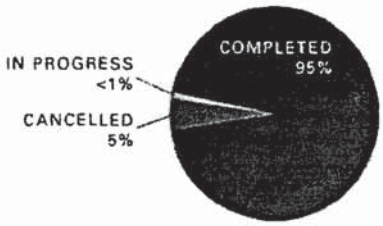


Figure 8. Driver License Division transaction status rates.

Of the seven transaction types in the DLS data, initiated transaction type rates in DLOs, as a percentage of all transaction types, ranged from 2% for Renew ID transactions to 37% for Renew DL transactions (Figure 9).

Initiated transaction volume varied by month, day of week, and hour of day.

Monthly, initiated transaction volume peaked in August (Figure 10). The August peak was likely connected to students fulfilling DL and ID requirements before the start of the school year. Renew DL and Duplicate DL transactions were initiated more than any other transaction type across all months (Figure 11).

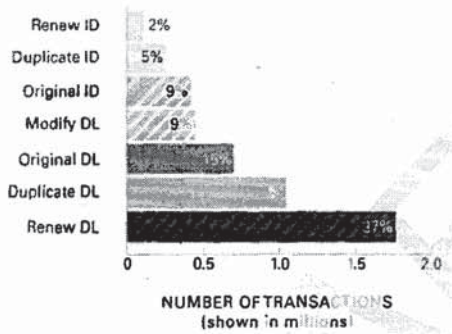


Figure 9. Number and percent of initiated transactions by transaction type.

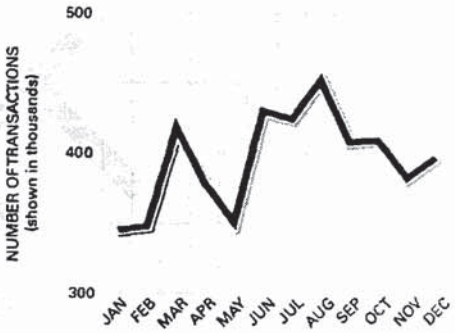


Figure 10. Number of initiated transactions by month of year for CY 2010.

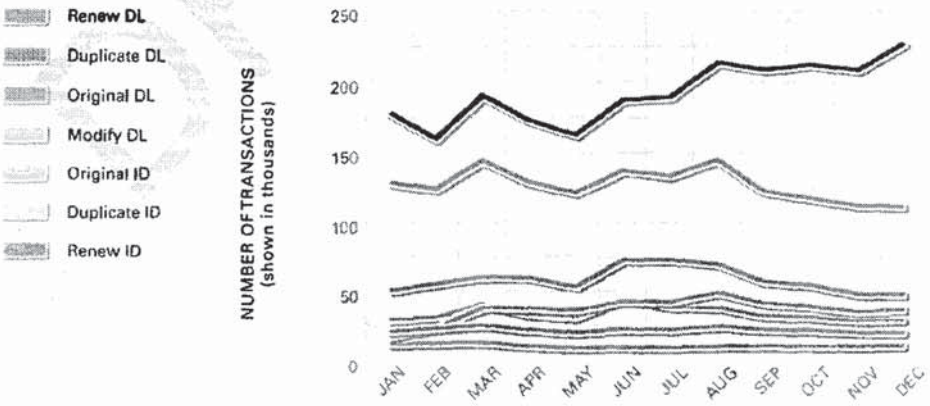


Figure 11. Number of initiated transactions by region by transaction type for CY 2010.

The largest volume of initiated transactions occurred on Tuesdays and the smallest volume occurred on Thursdays (Figure 12). The number of DLOs open and the number of DLOs with late-day hours were explored as possible contributing factors. However, neither the peak on Tuesday nor the dip on Thursday could be explained by these variables. During the average workday, initiated transactions in the morning peaked during the 10 o'clock hour with a decrease in the 12 o'clock hour. In the afternoon, initiated transaction volume increased hourly from the 12 o'clock hour to the workday peak in the 4 o'clock hour (Figure 13). It is important to note that the decrease in initiated transactions during the 12 o'clock hour may not have been an indication of a decrease in customer demand, but rather a decrease in the number of employees processing transactions during that hour.

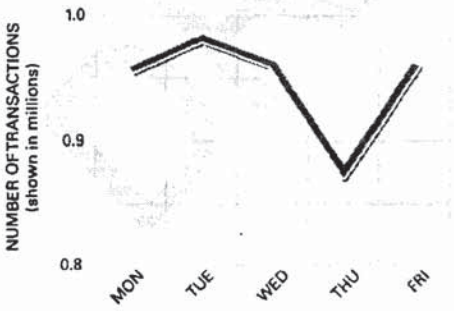


Figure 12. Initiated transaction volume by day of week.

Initiated transactions for Temporary Visitors, as a percentage of total initiated transactions, peaked in September (Figure 14). The September peak is likely related to the influx of international university students for the fall semester requiring DLs and IDs.

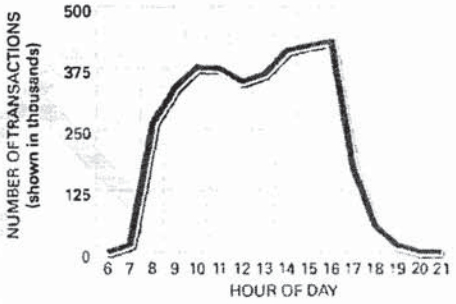


Figure 13. Initiated transaction volume by hour of day.

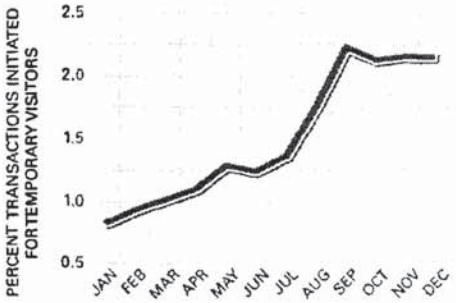


Figure 14. Initiated transactions for Temporary Visitors as a percentage of initiated transactions by month.

Of the seven transaction types in the DLS data, transaction processing times ranged from an average of 00:03:01 minutes for Duplicate DL transactions to an average of 00:23:31 minutes for Modify DL transactions (Table 4).

REGIONAL

Of the 4,736,009 initiated transactions in DLOs, Region 1B had the most initiated transactions with 16.5% of the state total and Region 5 had the least initiated transactions with 5.8% of the state total (Figure 15).

Region 1B had the highest volume of initiated transactions with transaction status Cancelled and Region 2A had the highest volume of initiated transactions with transaction status In Progress (Figure 16). As a percentage of total initiated transactions by region, Region 6A had the highest rate of initiated transactions with transaction status Complete at 94.8% and Region 4 had the lowest at 91.7% (Figure 17). Region 1B had the highest volume of transactions with a Correction No Fee descriptor (Figure 18). Region 1B also had the highest percentage of transactions with a Correction No Fee descriptor as a percentage of the Region's initiated transactions at 3.1% and Region 4 had the lowest at 2.5% (Figure 19). Region 2A had the highest volume of initiated transactions for Temporary Visitors (Figure 20). Region 2A also had the highest percentage of initiated transactions for Temporary Visitors as a percentage of the Region's initiated transactions at 4.2% and Region 6A had the lowest at 0.9% (Figure 21). Region 1B had the highest volume of initiated transactions for Out-of-State Transfers (Figure 22). Region 6B had the highest percentage of initiated transactions for Out-of-State Transfers with 7.3% and Region 3 had the lowest with 2.9% (Figure 23).

Table 4. Average processing time for completed transactions in CY 2010

Transaction Type	Average Processing Time
Renew ID	00:03:24
Duplicate ID	00:03:02
Original ID	00:04:29
Modify DL	00:23:31
Original DL	00:17:28
Duplicate DL	00:03:01
Renew DL	00:04:18

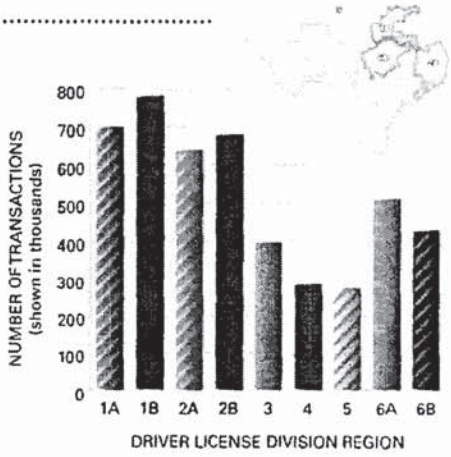


Figure 15. Volume of initiated transactions by Driver License Region.

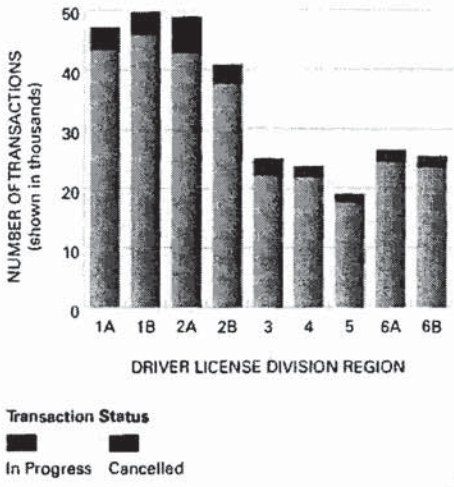


Figure 16. Transaction status (In Progress or Cancelled) volumes by region for initiated transactions.

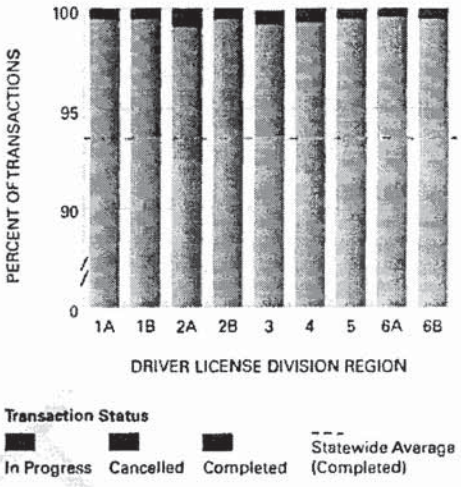


Figure 17. Transaction status for initiated transactions as a percentage of initiated transactions by region.

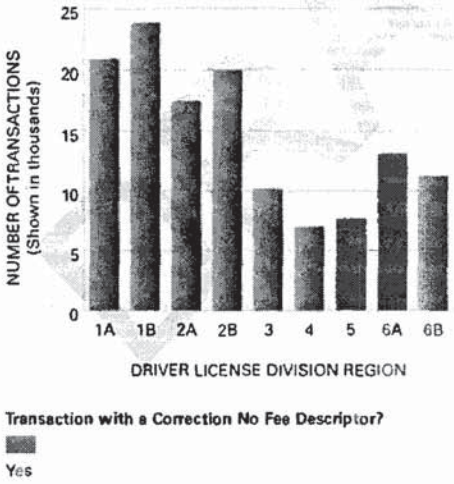


Figure 18. Volume of initiated transactions with a Correction No Fee descriptor by region.

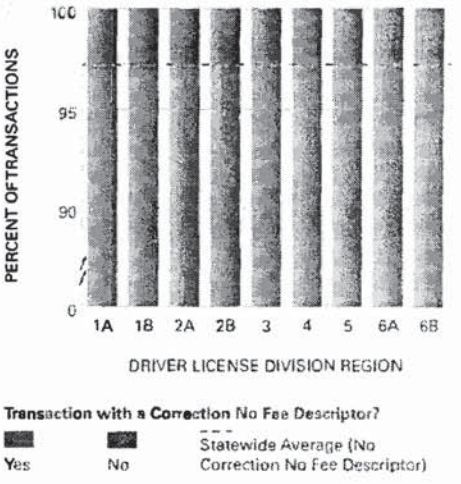
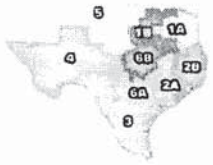


Figure 19. Initiated transactions with a Correction No Fee descriptor as a percentage of initiated transactions by region.



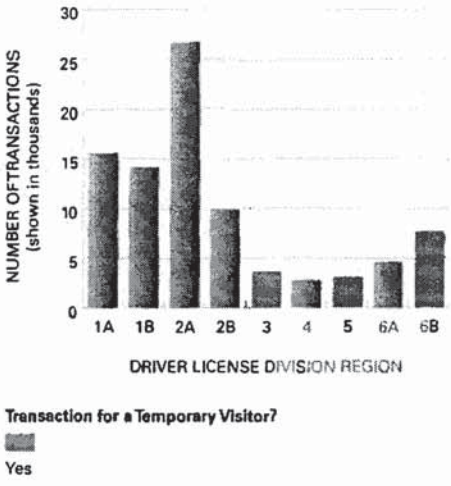


Figure 20. Volume of initiated transactions for Temporary Visitors by region.

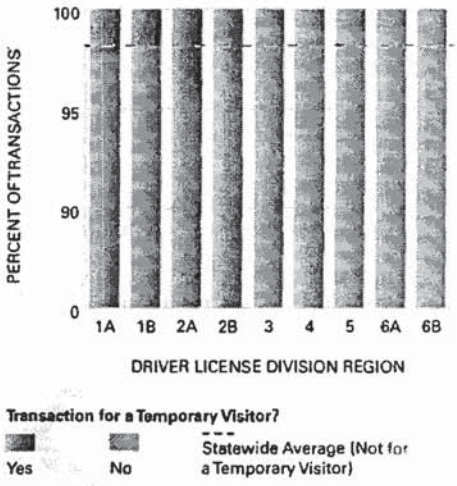


Figure 21. Initiated transactions for Temporary Visitors as a percentage of initiated transactions by region.

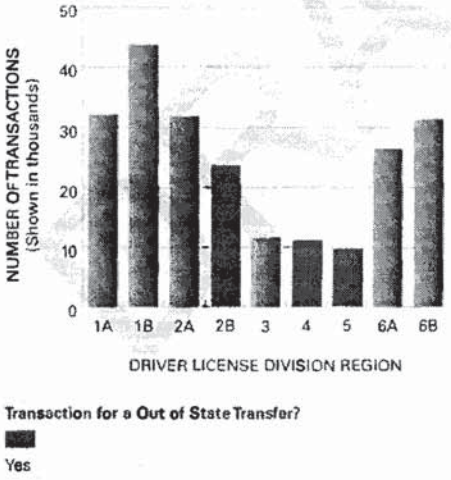


Figure 22. Volume of initiated transactions for Out of State Transfers by region.

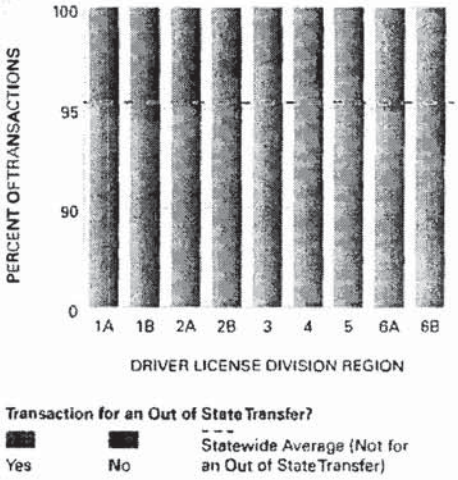


Figure 23. Initiated transactions for Out of State Transfers as a percentage of initiated transactions by region.

Of the seven transaction types in the DLS data, Renew DL was the most frequent initiated transaction type and Renew ID was the least frequent initiated transaction type in all regions (Figure 24 and Figure 25). This Regional trend follows the statewide results.

Regionally, initiated transaction volumes varied by month, day of week, and hour of day. In all regions, initiated transaction volume peaked in August (Figure 26 and Figure 27). Daily, initiated transaction rates were similar to the statewide rate with low volumes of initiated transactions on Thursday. Region 6A had a spike in initiated transactions on Wednesdays (Figure 28 and Figure 29). Approximately 64% of transactions in Region 6A were initiated in San Antonio and every DLO in San Antonio had a late-day closure on Wednesday. This is a possible explanation for the peak in initiated transaction on Wednesdays in Region 6A.

Average transaction processing time was calculated for each of the seven transaction types by region. Duplicate DL average processing times ranged from 00:02:54 minutes in Region 2B to 00:03:08 minutes in Region 6B. Duplicate ID average processing times ranged from 00:02:52 minutes in Region 6A to 00:03:11 minutes in Region 6B. Modify DL average processing times ranged from 00:14:40 minutes in Region 2A to 00:27:23 minutes in Region 1B. Original DL average processing times ranged from 00:14:01 minutes in Region 2A to 00:23:22 minutes in Region 4. Original ID average processing times ranged from 00:04:18 minutes in Region 2B to 00:04:57 minutes in Region 5. Renew DL average processing times ranged from 00:03:48 minutes in Region 2B to 00:05:04 minutes in Region 5. Renew ID average processing times ranged from 00:03:14 minutes in Region 6A to 00:03:38 minutes in Region 5 (Table 5). Duplicate DL, Duplicate ID, Original ID, and Renew ID average transaction processing times varied among regions by less than 40 seconds. These small variations in average processing time suggested that implementing additional training to improve processing time for these transactions types would have minimal impact on DLD resources and customer wait times. However, the larger variation for Modify DL, Original DL, and Renew DL transactions indicates the transaction types that should be the focus of improvement measures for regions with higher processing times. Decreases in average transaction processing times would directly affect customer wait times.

USAGE AND PROCESSING FACTORS

DLO/FTE Usage and Processing Factors were calculated statewide, by region, site code, office size, and office type. Statewide, the DLO Usage Factor (average number of transactions completed per Operational Hour) was 10.9. The FTE Usage Factor (average number of transactions completed per Employee Hour) was 2.3. The DLO Processing Factor (average number of hours spent processing transactions during an Operational Hour) was 1.1 for the state. The statewide DLO Processing Factor was greater than one hour because most DLOs had more than one FTE processing transactions per hour. Statewide, the FTE Processing Factor was 22% (Table 6). DLO/FTE Usage and Processing Factors for the different office sizes and types can also be found in Table 6. Results by site code are in Appendix A, Table 1A.

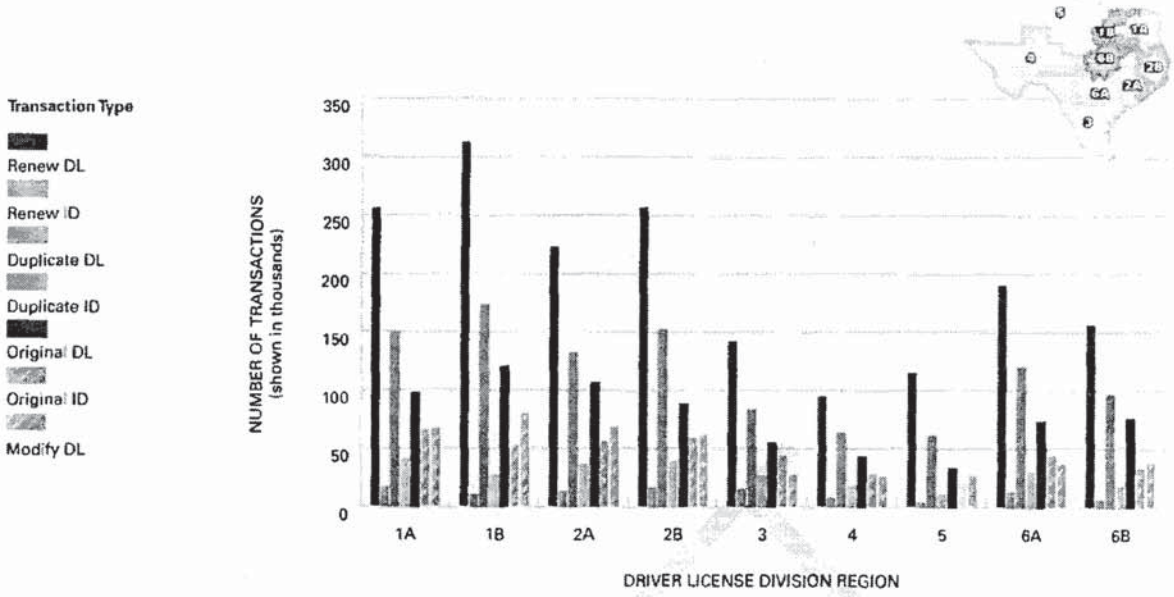


Figure 24. Transaction Type volume by region.

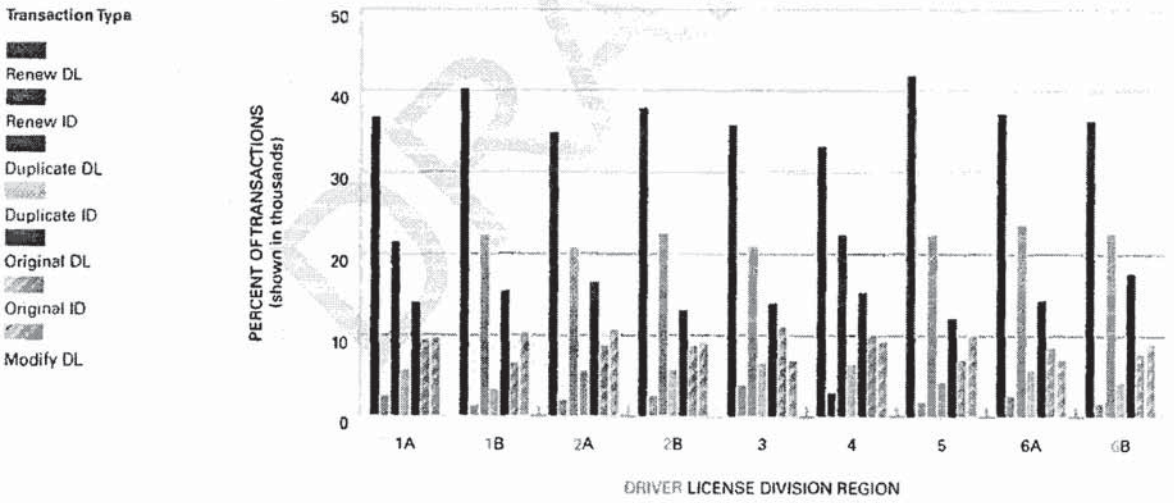


Figure 25. Transaction Type volume as a percentage of initiated transactions by region.

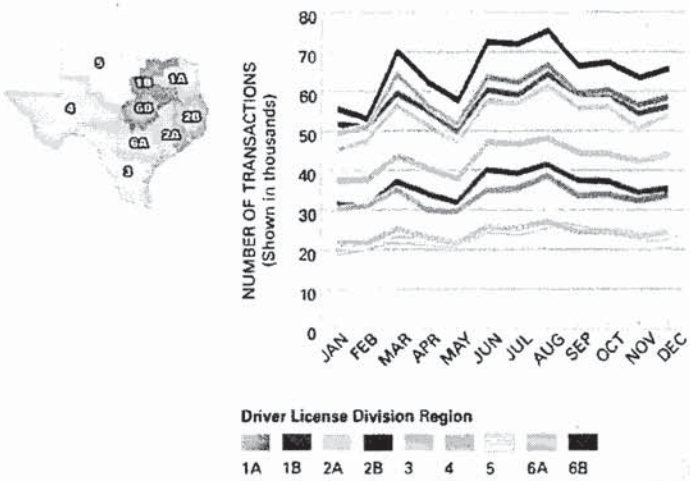


Figure 26. Transaction volume by month of year by region.

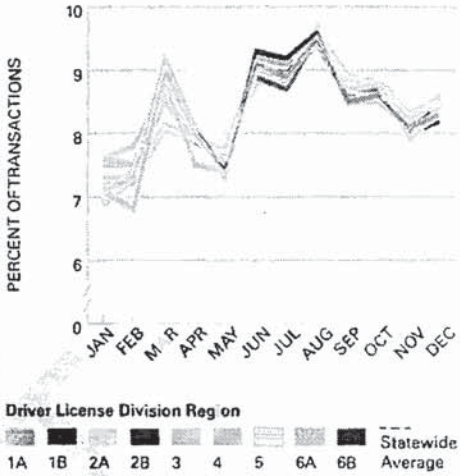


Figure 27. Transaction volume as a percentage of initiated transactions by region.

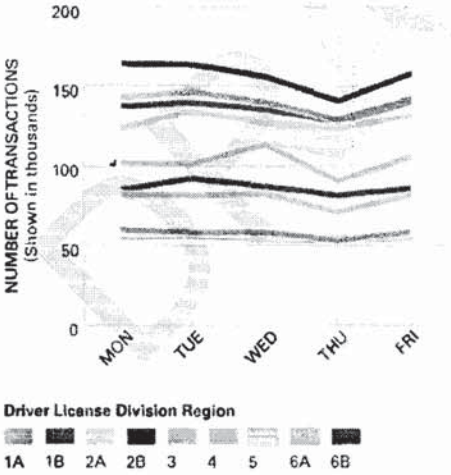


Figure 28. Transaction volume by day of week by region.

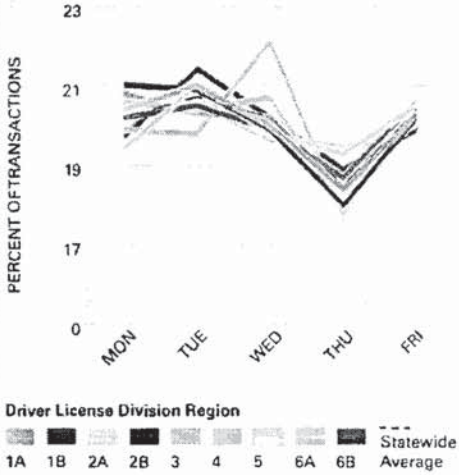


Figure 29. Transaction volume as a percentage of initiated transactions by day of week by region.

Table 5. Average transaction processing time by transaction type by region.

Region	Duplicate DL	Duplicate ID	Modify DL	Original DL	Original ID	Renew DL	Renew ID
1A	0:02:56	0:02:58	0:24:26	0:18:12	0:04:19	0:04:18	0:03:18
1B	0:02:57	0:02:59	0:27:23	0:16:17	0:04:33	0:04:27	0:03:26
2A	0:03:05	0:03:10	0:14:40	0:14:01	0:04:28	0:03:54	0:03:26
2B	0:02:54	0:02:59	0:25:36	0:19:00	0:04:18	0:03:48	0:03:17
3	0:03:07	0:03:11	0:25:59	0:18:59	0:04:29	0:04:38	0:03:31
4	0:03:01	0:03:02	0:24:16	0:23:22	0:04:32	0:04:30	0:03:26
5	0:03:12	0:03:07	0:20:32	0:19:32	0:04:57	0:05:04	0:03:38
6A	0:03:01	0:02:52	0:26:02	0:19:19	0:04:28	0:04:21	0:03:14
6B	0:03:08	0:03:11	0:23:03	0:15:39	0:04:50	0:04:27	0:03:34

Table 6. Usage and Processing Factors by region, DLO type, and DLO size.

			Usage		Processing	
		Initiated Transaction Volume	DLO	FTE	DLO	FTE
Statewide		4,736,009	10.93	2.34	1.10	22%
Region	1A	700,597	11.54	2.35	1.13	23%
	1B	781,562	15.47	2.70	1.62	28%
	2A	640,218	21.44	2.26	1.80	18%
	2B	680,341	12.27	2.63	1.15	24%
	3	399,201	9.34	2.33	0.92	21%
	4	287,772	7.06	1.71	0.79	17%
	5	276,964	4.53	1.78	0.50	19%
	6A	513,116	12.87	2.55	1.34	26%
	6B	431,474	10.11	2.31	1.06	23%
Type	Full-Time	4,648,948	11.99	2.36	1.21	22%
	Part-Time	60,607	1.71	1.56	0.18	16%
	Mobile	1,690	0.17	0.17	0.03	03%
Size	Mega	151,236	64.06	1.71	5.49	15%
	Large	2,555,428	27.09	2.40	2.64	23%
	Medium	1,159,875	13.35	2.45	1.25	23%
	Small	844,706	3.38	2.13	0.34	21%

DLO Usage and Processing Factors provided a general understanding of the supply and demand of services at DLOs. However, because these calculations use Operational Hours and not Employee Hours, these calculations could not be used to compare DLOs by size. For comparison of all DLOs, FTE Usage and Processing Factors were more useful. FTE Usage and Processing Factors were a more standardized measure that could be compared across regions and DLOs. In other words, an employee working in any DLO should have been able to complete the same number of transactions in the same amount of time as an employee in another DLO. However, the results of the analysis showed FTE Usage and Processing Factors were not the same in every region or at every DLO. There are some limitations to FTE Usage and Processing Factors that are detailed in the following paragraphs.

The primary contributing factors to variation among FTE Usage and Processing Factors were the rate at which employees processed transactions and the rate at which customers visited a DLO. For example, a low FTE Usage Factor could represent one of two very different situations. First, a lower FTE Usage Factor could mean that employees are not processing transactions as quickly as at other DLOs. Secondly, a low volume of initiated transaction could be the result of a low volume of customers requesting a transaction. The employees may be processing efficiently and effectively at these DLOs but do not have enough customers to stay busy all of the time. These two distinct situations make it important to view FTE Usage Factors in the context of the specific customer conditions at an individual DLO.

The highest FTE Processing Factor values may appear low, but there are multiple factors that contributed to the overall low numbers across DLOs. First, it is important to recall that Employee Hour calculations assumed that all allocated FTEs worked a full 40 hours 52 weeks out of the year. Employees likely took vacations and sick leave. However, because the exact work schedules of employees were an unknown factor, the maximum number of possible hours worked was used for consistency. In addition, some DLOs did not maintain the maximum number of FTEs throughout the year. However, all DLOs had to be considered at full capacity because data on FTE vacancies were unavailable. Another factor that contributed to lower than expected FTE Processing Factors was FTEs that were not processing transactions. For example, at any given time some FTEs could be administering tests, working the info desk, or performing other office duties. Therefore, it was most useful not to consider the calculations as definitive values, but rather as a tool to compare DLOs. As with initiated transaction volume per DLO FTE Performance Factors should be considered in the context of specific conditions at DLOs (i.e. office size, location, etc.).

PHASE TWO: CUSTOMER DEMAND

MODELING STATEWIDE POTENTIAL DEMAND FOR DLD SERVICES

Compared to existing DLOs, the Optimal Office Location Model placed a greater number of offices for all Analysis Populations in Regions 1B, 2A, 2B, and 6A and a lower number in Regions 3, 4, 5, and 6B (Figure 30 and Figure 31). Region 1A had a greater number of offices modeled, compared to existing DLOs, using the 2010 Weighted and 2010 Employee Population, but fewer offices using the 2015 Weighted Population. This indicates that, as a percentage of statewide population, Region 1A had a larger percentage of population in 2010 than it is predicted to have in 2015. The model placement of more offices in Regions 1B, 2A, 2B, and 6A for all three Analysis Populations and in 1A for two of the three Analysis Populations indicated a potential need for increased DLD services in these Regions. Even though the model placed fewer offices than currently exist in Regions 3, 4, 5, and 6B, it does not necessarily mean that the demand in these regions is decreasing. It simply indicates that to be equitably allocated, these Regions should have less than their current allocation of offices.

REGIONAL FTE REALLOCATION

Regional FTE reallocation trends generally followed the Optimal Office Location Model results. Regional FTE reallocations for all Analysis Populations resulted in FTE decreases in Regions 3, 4, and 5 and increases in Regions 1A, 1B, 2A, 2B, and 6A. Region 6B was the only region where regional FTE reallocation did not follow the modeled increases and decreases of the Optimal Office Location Model. Region 6B showed a decrease in Modeled Optimal Office Locations but an increase in FTEs. This is likely a reflection of population distribution in Region 6B (Figure 32). The majority of the population in the region is concentrated in Austin, suggesting the need for fewer DLOs with a greater number of FTEs in each.

The regional FTE reallocation numbers were an indication of customer demand and a guide in other analyses. Specific DLO staffing recommendations were completed in Phase Three.

CONFLUENCES OF STATEWIDE OPTIMAL OFFICE LOCATIONS

A total of 178 Model Confluences were identified across Texas: 92 Three-Model Confluences, 28 Two-Model Confluences, and 58 Three-Model Confluences without an Existing DLO (Table 7). Three-Model Confluences without an Existing DLO were simplified into 58 Statewide Points of Demand (Figure 33). The DLOs contained within Three-Model or Two-Model Confluences are listed in Appendix A, Table 2A.

Three-Model Confluences with an existing DLO identified existing DLOs that were in

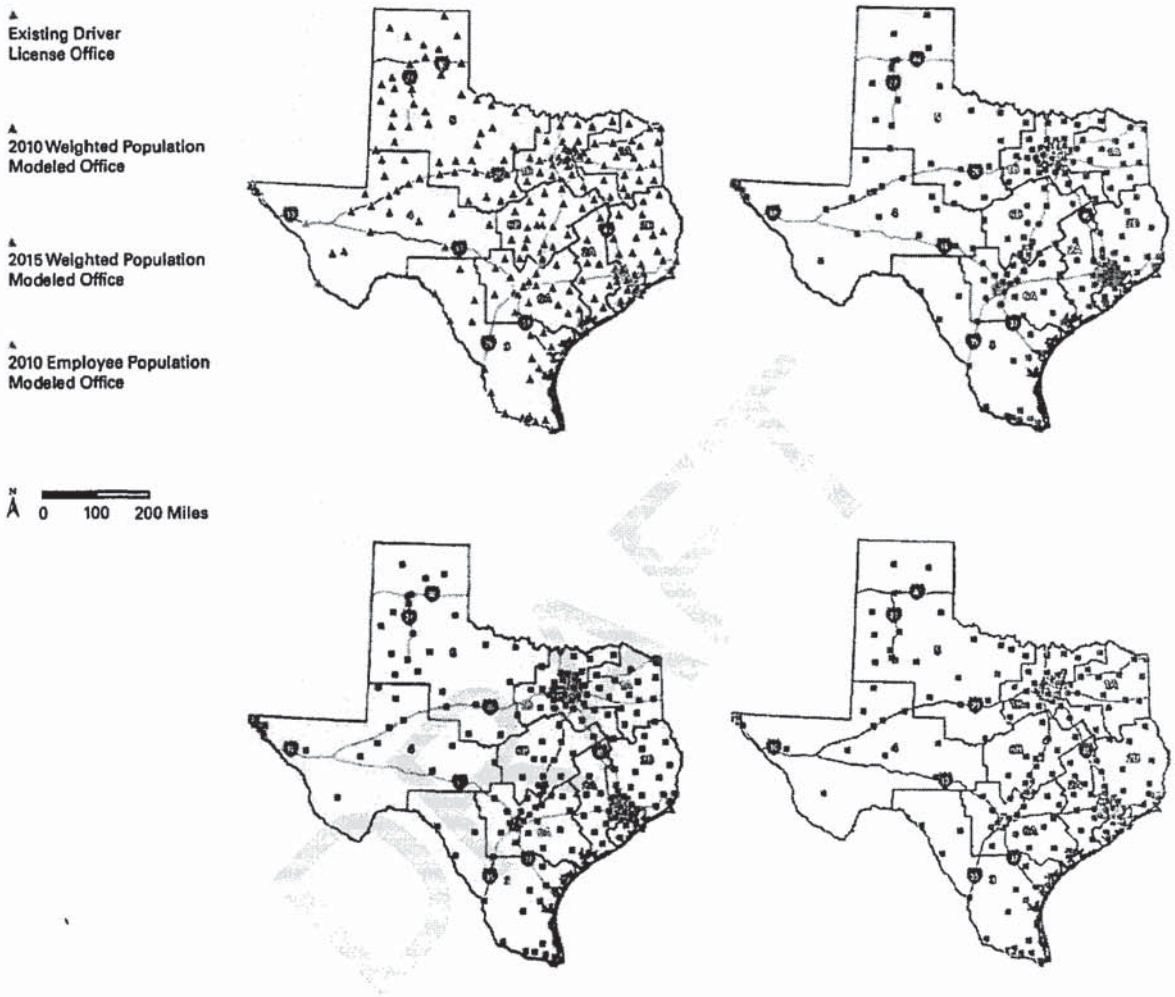


Figure 30. The map with red triangles depicts the location of 2010 Existing Driver License Offices. The other three maps depict the results of Optimal Office Location Models using the 2010 Weighted, 2015 Weighted, and 2010 Employee Populations.

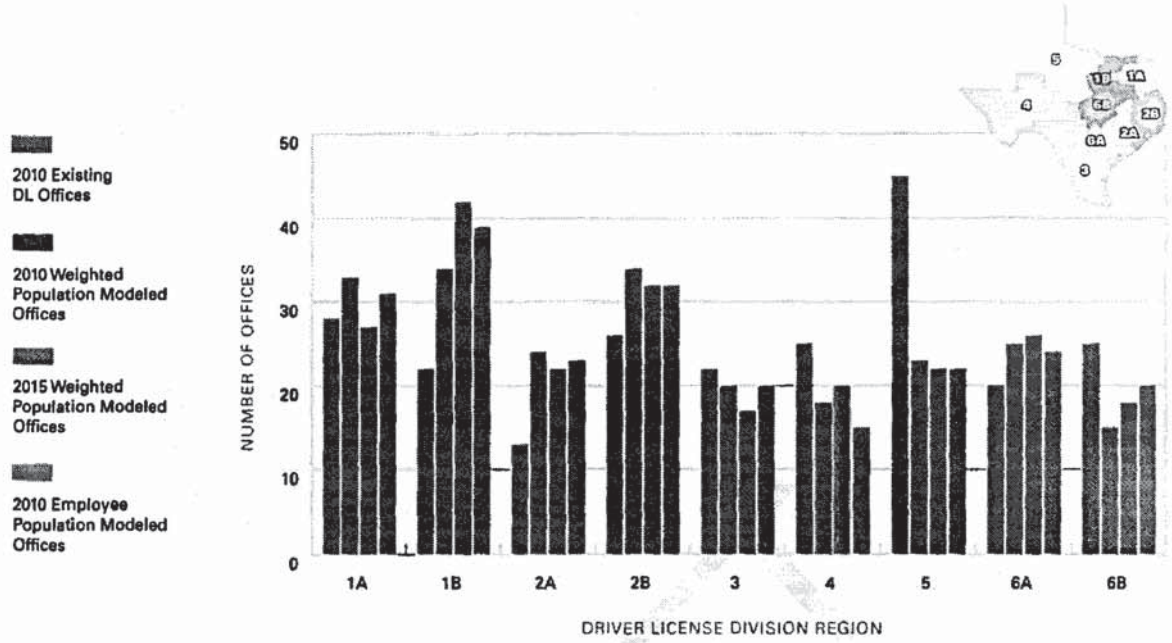


Figure 31. Comparison of exisiting DLOs and Optimal Office Location Model results by region.

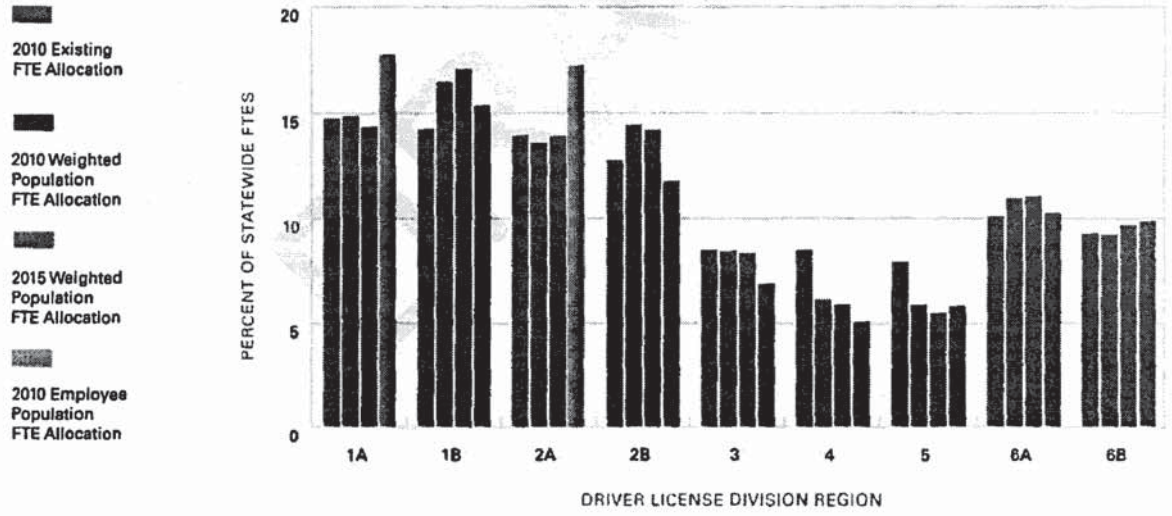
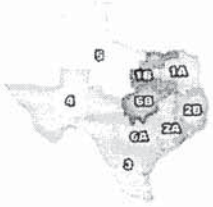


Figure 32. Comparison of percent of statewide existing FTEs and model-reallocated FTEs by region.

Table 7. Number of Three-Model, Two-Model, and Three-Model without an Existing DLO Confluences by region.



Region	Three-Model Confluence	Two-Model Confluence	Three-Model Confluence without an Existing DLO	Total
1A	14	5	8	27
1B	16	6	10	32
2A	8	0	7	15
2B	11	6	11	28
3	10	1	2	13
4	7	3	2	12
5	10	3	4	17
6A	9	3	9	21
6B	7	1	5	13
Statewide	92	28	58	178

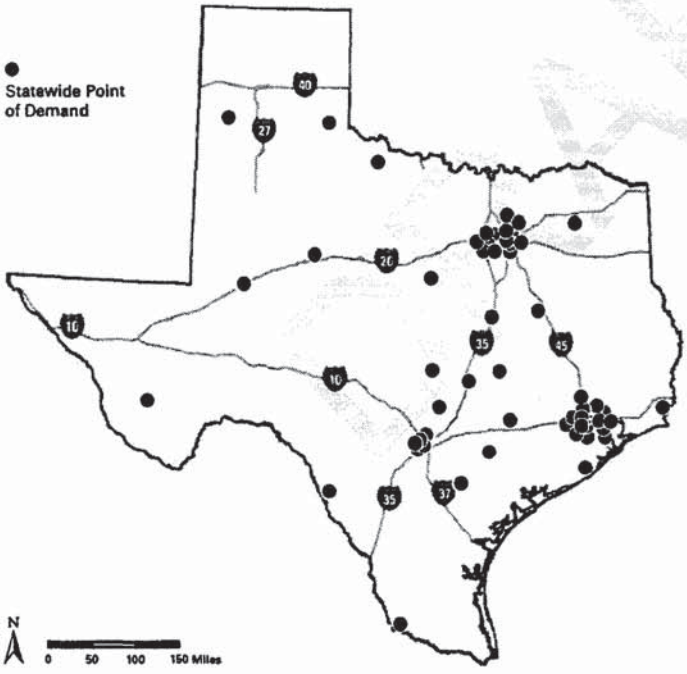


Figure 33. Fifty-eight statewide points of demand were identified.

a location with high customer population. Three-Model Confluences without an existing DLO indicated areas with high customer populations that are potentially not being adequately served and have the greatest need for a new DLO since all three Analysis Population models came together at that particular location and there is no DLO nearby.

PHASE THREE: OFFICE RECOMMENDATIONS

MEGA DRIVER LICENSE OFFICE ANALYSIS

To determine the most equitable distribution of potential Mega DLOs and FTEs, initiated transaction volume (for Regions that contained Mega Urban Study Areas) and model-reallocated FTEs (for both Mega Urban Study Areas and Regions that contained Mega Urban Study Areas) were examined.

MEGA DLO REGIONS

Model-reallocated FTEs and initiated transaction volumes in Mega Urban Study Areas and Regions with Mega Urban Study Areas were calculated to gain a general understanding of customer demand and FTE reallocation. The model-reallocated FTEs and initiated transaction volumes were not final recommendations, but served as a guide in determining the number of potential Mega DLOs that should be placed in each region. The comparison of model-reallocated FTEs for the DLD Regions with Mega Urban Study Areas revealed that Regions 1A and 1B combined, which include DFW, had the greatest increase of FTEs at 103.3. Regions 2A and 2B (containing Houston) had an increase of 84.6 FTEs. Region 6A (containing San Antonio) had an FTE increase of 37.5. Region 6B (containing Austin) had an FTE increase of 28.4. Mega DLOs must have at least 25 FTEs. Although these FTE reallocations are at the regional level and not the Mega Urban Study Area level they still provide useful information for some initial considerations. For example, Region 6B (containing Austin) had an FTE reallocation increase of 28.4. This suggests that only one potential Mega DLO should be recommended in this region. In contrast, Regions 1A and 1B (containing DFW) had an FTE reallocation increase of 103.3. These numbers suggest the possibility that these two Regions could support as many as four Mega DLOs. The results of model-reallocated FTEs for the Mega Urban Study Areas were used to further refine the results of model-reallocated FTEs for the DLD Regions.

Initiated transaction volumes by region revealed that Regions 1A and 1B, which contain DFW, combined had the highest annual initiated transaction volume of 1,482,159. Regions 2A and 2B, which contain Houston, had a combined annual initiated transaction volume of 1,320,559. Region 6A, containing San Antonio, had 513,116 initiated transactions and Region 6B, containing Austin, had 431,474 (Figure 15, Page 31). Initiated transaction volumes for the Houston Regions and DFW Regions were similar suggesting a similar customer demand. The Regions containing San Antonio and Austin also had similar initiated transaction volumes. Comparable transaction volumes between regions were an indication of similar customer demand for services, including Mega DLOs if customers are in densely populated areas.

MEGA URBAN STUDY AREAS

The Mega Urban Study Areas for Austin, San Antonio, DFW, and Houston are depicted in Figure 34.

Using statewide FTE reallocations, the number of FTEs in the Austin Mega Urban Study Area increased from 54 to 78 for a total of 24 additional FTEs. The San Antonio Mega Urban Study Area increased from 63 to 87 for a total of 24 more FTEs. The DFW Mega

Urban Study Area increased from 205 to 306 for an increase of 101 FTEs. The Houston Mega Urban Study Area increased from 217 to 286 for an increase of 69 FTEs (Figure 35). A total of 218 of the additional 250 statewide FTEs were model-reallocated to the four Mega Urban Study Areas. The model-reallocation of 218 of the 250 FTEs to the four Mega Urban Study Areas indicated that there is concentrated, high customer demand in these areas that requires the majority of the additional 250 FTEs for equitable service compared to the rest of the state.

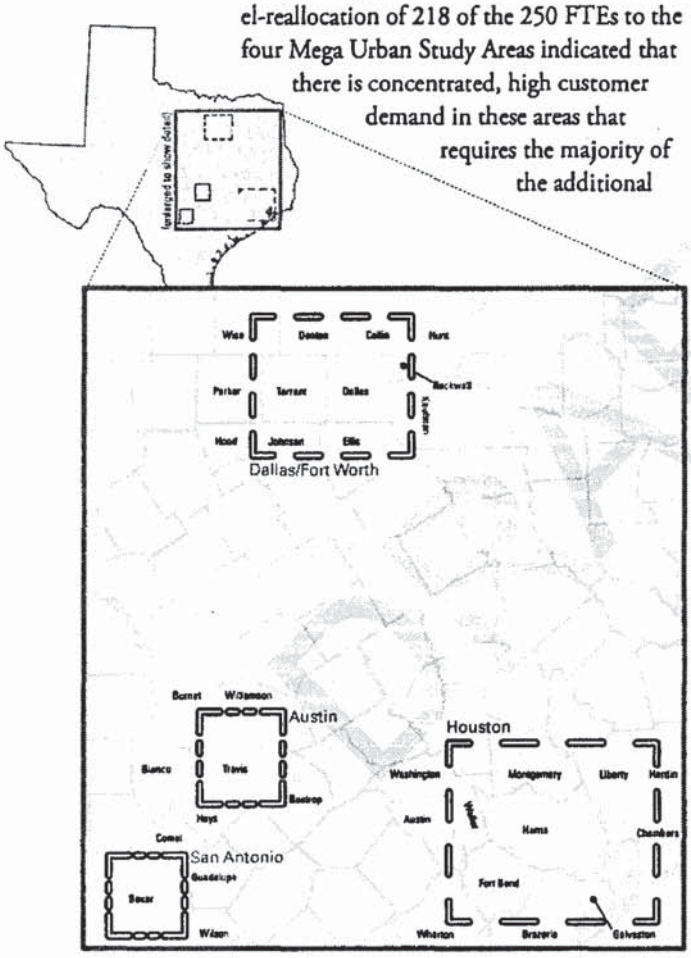


Figure 34. Mega Urban Study Areas.

POTENTIAL MEGA DLO LOCATION RECOMMENDATIONS

The number of FTEs reallocated to each of the DLD Regions proposed to receive potential Mega DLOs and each of the Mega Urban Study Areas, along with initiated transaction volumes by region were used to determine the most equitable distribution of the six potential Mega DLOs. Model-reallocated FTEs by Mega Urban Study Area and Regions with Mega Urban Study areas revealed that DFW and Houston (and their respective DL Regions) had more than twice as many additional FTEs reallocated than Austin and San Antonio, suggesting the placement of

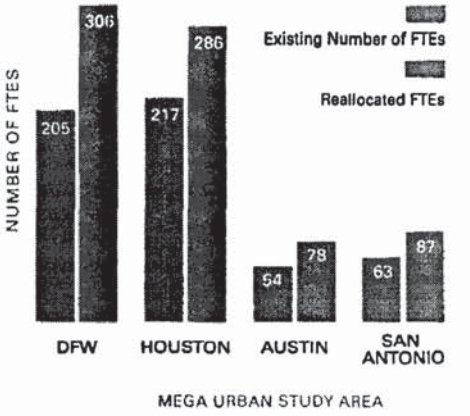


Figure 35. Number of existing and model reallocated FTEs (including 250 additional statewide FTEs) by Mega Urban Study Area.

one Mega DLO in Austin, one in San Antonio, and two in both DFW and Houston. Initiated transaction volumes by Region also revealed more than twice as many initiated transactions in DFW and Houston as Austin and San Antonio, supporting the recommendation of one Mega DLO in Austin, one in San Antonio, and two in both DFW and Houston.

MEGA URBAN AREA POINTS OF DEMAND

Two Mega Urban Area Points of Demand were established for Austin, three for San Antonio, ten for DFW, and nine for Houston. As described in the Methods section, Mega Urban Area Points of Demand represented optimal locations for Mega DLOs based on the three Analysis Populations. These Mega Urban Area Points of Demand served as starting points in determining the optimal locations for one Mega DLO in Austin, one in San Antonio, two in DFW, and two in Houston. The final potential Mega DLO location recommendations were near major transportation routes and large customer populations.

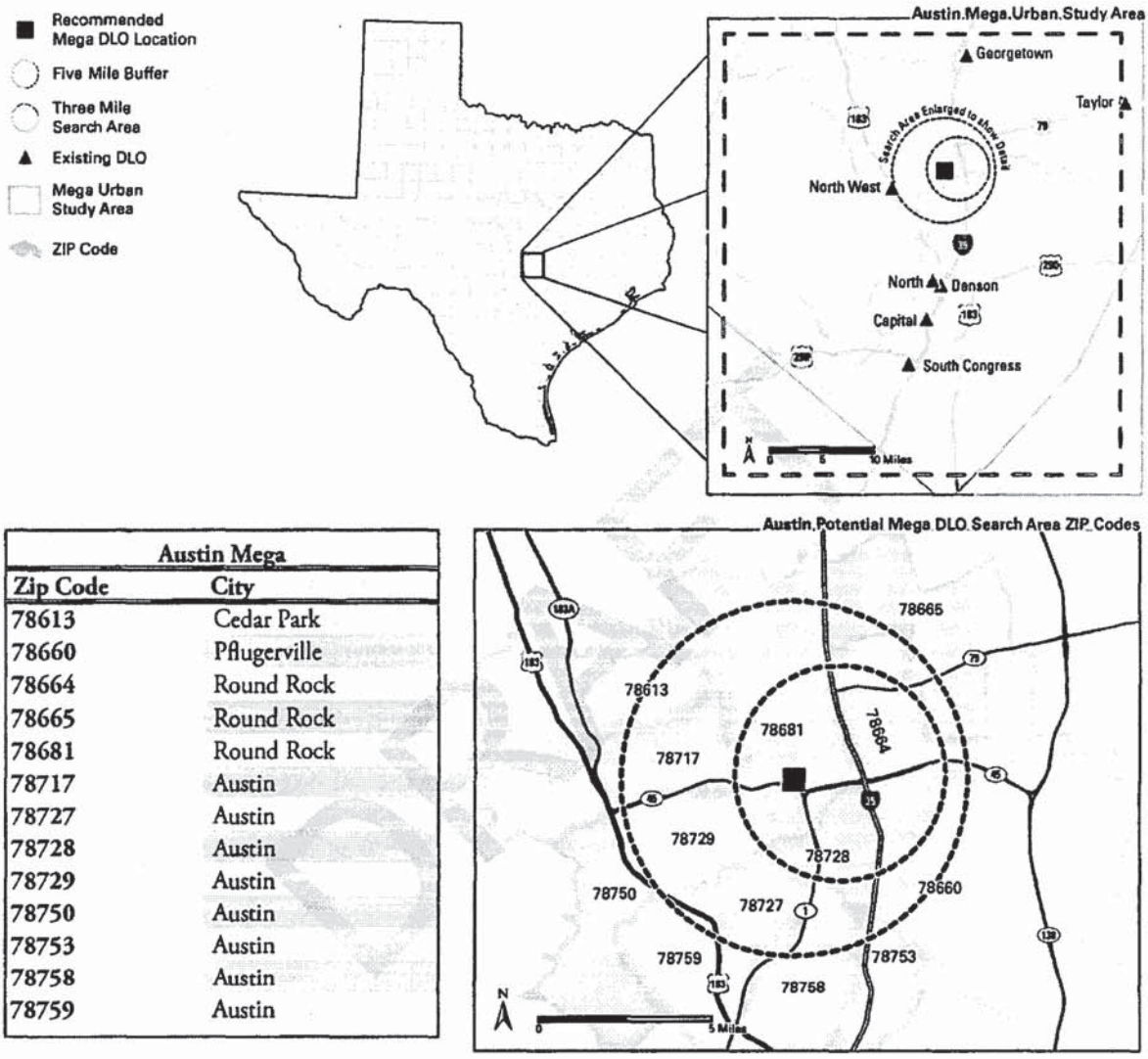
POTENTIAL MEGA DLO LOCATIONS

As stated in the Methods section, two potential Mega DLO location scenarios were presented to TxDPS for both San Antonio and DFW. In the San Antonio Mega Urban Study Area, the first potential Mega DLO scenario placed one Mega DLO in northwest San Antonio. The second scenario placed one Mega DLO in west San Antonio. In the DFW Mega Urban Study Area, the first scenario placed one Mega DLO in northeast Dallas and one in north Arlington. The second scenario placed one Mega DLO in north Dallas and one in northeast Dallas. The scenarios selected by TxDPS are detailed below. Initially, no alternative scenarios were offered for Austin and Houston.

The Austin potential Mega DLO location was recommended in north Austin near the northwest intersection of Loop 1 and State Highway 45. The three-mile search area trended east towards Round Rock (Figure 36).

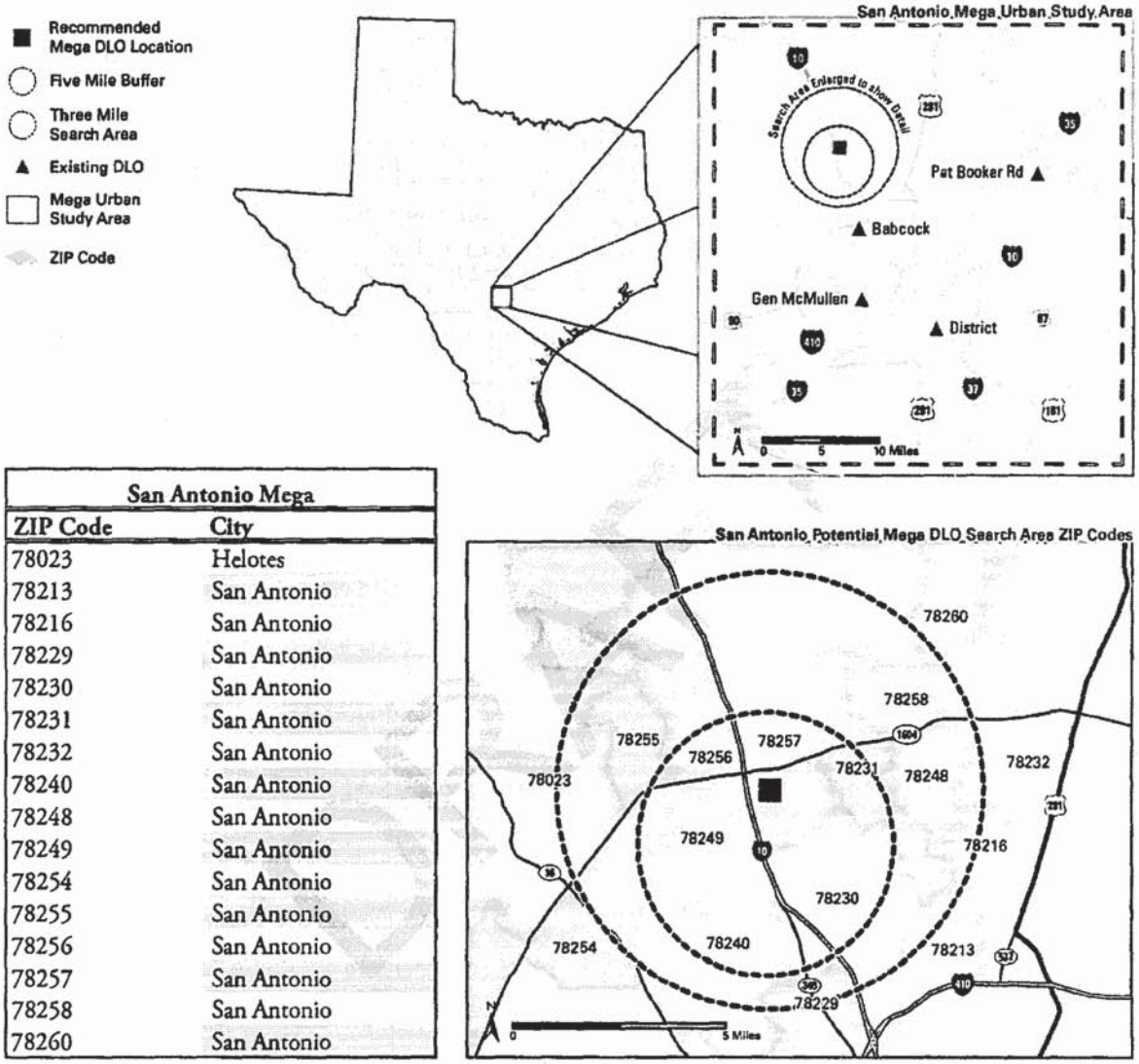
The San Antonio potential Mega DLO location chosen by TxDPS was in northwest San Antonio near the southeast corner of Interstate Highway 10 and Loop 1604. The three-mile search area trended southeast towards the center of San Antonio (Figure 37).

The potential Mega DLO location scenario chosen by TxDPS placed two Mega DLO locations in the DFW Mega Urban Study Area. One Mega DLO was located in Northeast Dallas at the northeast corner of Interstate Highway 635 and State Highway 75. The three-mile search area trended slightly southeast away from the Dallas-East DLO (Figure 38). The second Mega DLO location for DFW was in north Arlington at the northwest corner of Interstate Highway 30 and North Collins Street. The three-mile search area was directly in the center of the five-mile buffer (Figure 39).



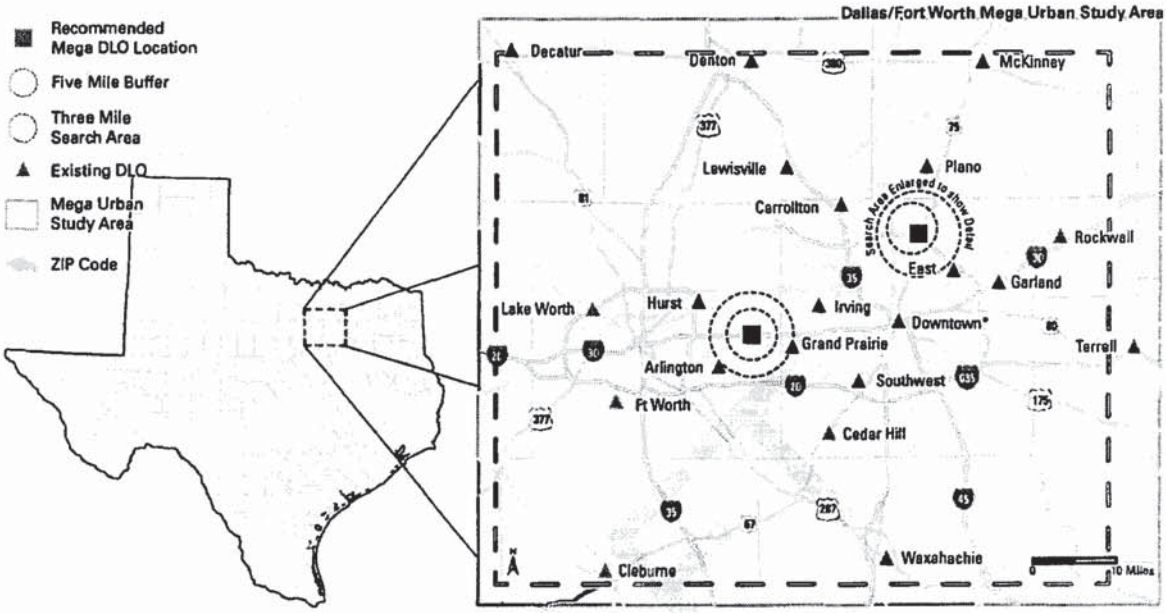
Austin Mega	
Zip Code	**City**
78613	Cedar Park
78660	Pflugerville
78664	Round Rock
78665	Round Rock
78681	Round Rock
78717	Austin
78727	Austin
78728	Austin
78729	Austin
78750	Austin
78753	Austin
78758	Austin
78759	Austin

Figure 36. One potential Mega DLO was recommended in north Austin near the intersection of Loop 1 and State Highway 45. A three-mile search area, a five-mile buffer, and ZIP Codes with their corresponding cities provided direction in the search for the Mega DLO lease site.



San Antonio Mega	
ZIP Code	City
78023	Helotes
78213	San Antonio
78216	San Antonio
78229	San Antonio
78230	San Antonio
78231	San Antonio
78232	San Antonio
78240	San Antonio
78248	San Antonio
78249	San Antonio
78254	San Antonio
78255	San Antonio
78256	San Antonio
78257	San Antonio
78258	San Antonio
78260	San Antonio

Figure 37. One potential Mega DLO was recommended in northwest San Antonio near the southeast corner of Interstate Highway 10 and Loop 1604. A three-mile search area, a five-mile buffer, and ZIP Codes with their corresponding cities provided direction in the search for the Mega DLO lease site.



Northeast Dallas Mega	
ZIP Code	City
75001	Addison
75041	Garland
75042	Garland
75044	Garland
75075	Plano
75080	Richardson
75081	Richardson
75082	Richardson
75206	Dallas
75214	Dallas
75218	Dallas
75220	Dallas

Northeast Dallas Mega	
ZIP Code	City
75225	Dallas
75229	Dallas
75230	Dallas
75231	Dallas
75238	Dallas
75240	Dallas
75243	Dallas
75244	Dallas
75248	Dallas
75251	Dallas
75252	Dallas
75254	Dallas

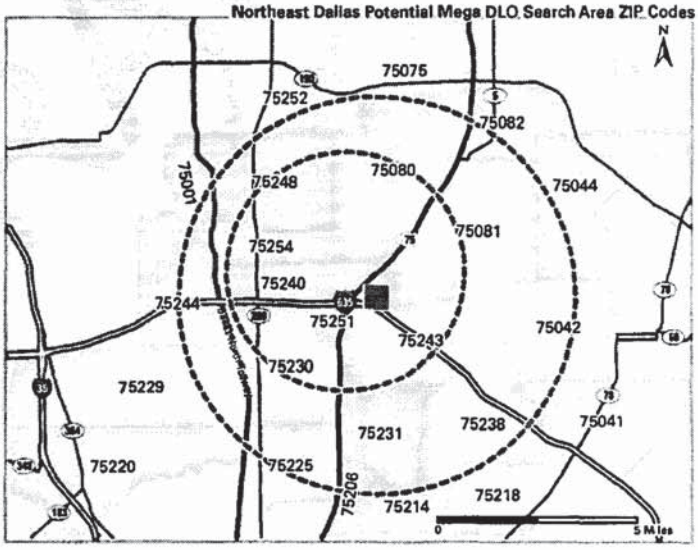
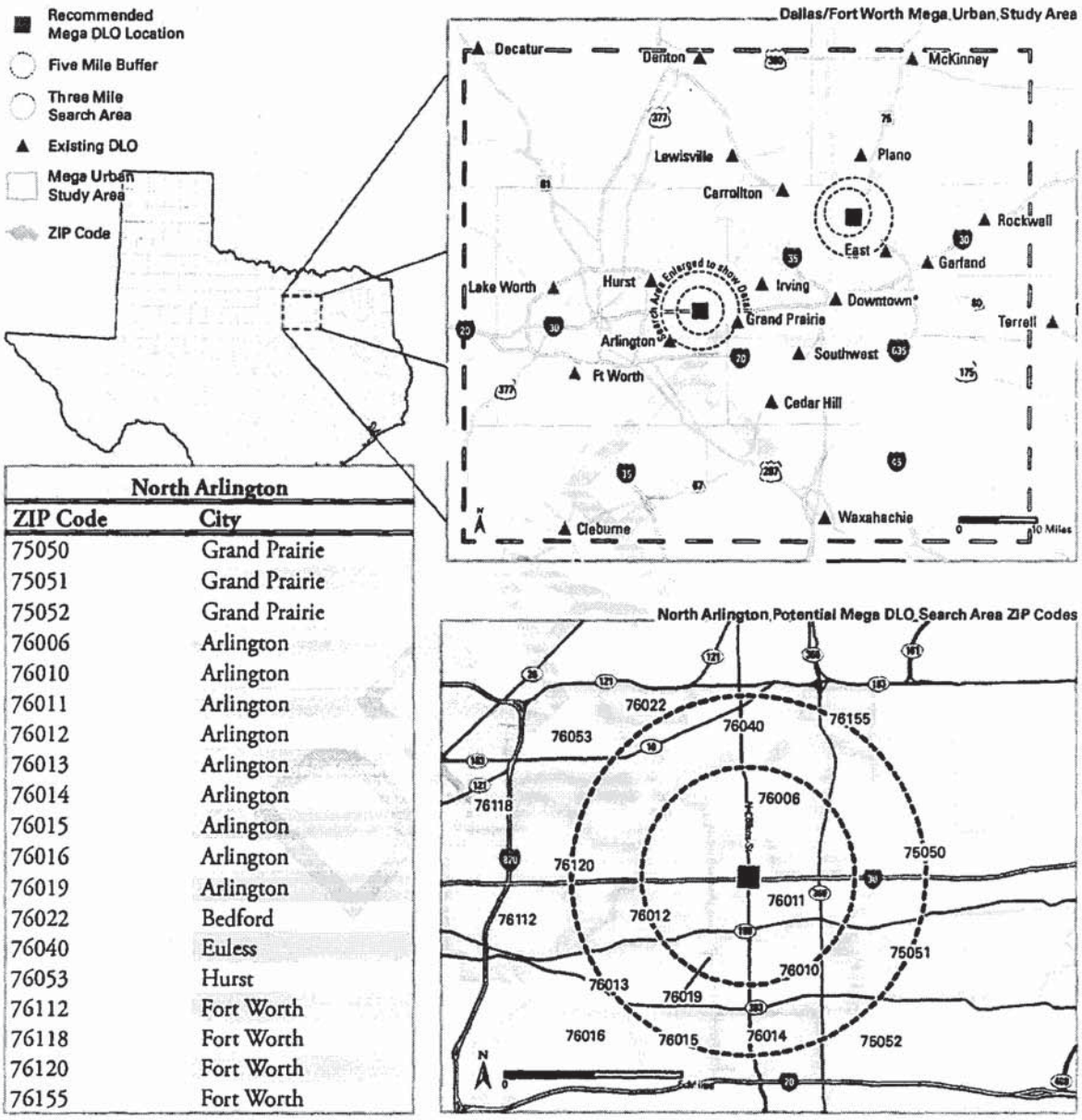


Figure 38. One potential Mega DLO was recommended in northeast Dallas at the northeast corner of Interstate Highway 635 and State Highway 75. A three-mile search area, a five-mile buffer, and ZIP Codes with their corresponding cities provided direction in the search for the Mega DLO lease site.



North Arlington	
ZIP Code	City
75050	Grand Prairie
75051	Grand Prairie
75052	Grand Prairie
76006	Arlington
76010	Arlington
76011	Arlington
76012	Arlington
76013	Arlington
76014	Arlington
76015	Arlington
76016	Arlington
76019	Arlington
76022	Bedford
76040	Euless
76053	Hurst
76112	Fort Worth
76118	Fort Worth
76120	Fort Worth
76155	Fort Worth

Figure 39. One potential Mega DLO was recommended in north Arlington at the northwest corner of Interstate Highway 30 and North Collins Street. A three-mile search area, a five-mile buffer, and ZIP Codes with their corresponding cities provided direction in the search for the Mega DLO lease site.

Two potential Mega DLO locations were recommended in the Houston Mega Urban Study Area. One Mega DLO location for Houston was recommended west of Houston, in Katy, near the intersection of Grand Parkway and Interstate Highway 10. The three-mile search area trended east towards the center of Houston (Figure 40). The second Mega DLO location for Houston was recommended in Downtown Houston. However, due to economic and social factors outlined by TxDPS (e.g. high lease costs, lack of leasable space, and crime rates) an alternative Mega DLO location was requested. The alternative second potential Mega DLO was recommended north of Houston, in Spring, at the intersection of Interstate Highway 45 and the Hardy Toll Road. The Spring Mega DLO was directly in the center of the three-mile search area (Figure 41).

RECOMMENDED FTE ASSIGNMENTS

FTE Assignments were recommended for all existing DLOs and potential Mega DLOs. No Statewide or Urban Area Points of Demand, including the six final recommended potential Mega DLO locations, were model-reallocated 25 or more FTEs (the minimum requirement for a Mega DLO). However, FTE Assignments were often different from model-reallocated FTE distributions because DLO FTE carrying capacities, existing FTE allocations, and the needs of TxDPS outlined in *What Will It Take to Fix Driver License?* all had to be considered.

The final FTE Assignments for the Austin, San Antonio, North Arlington, Katy, and Spring potential Mega DLOs were 25 FTEs each. The final FTE Assignment for the Northeast Dallas potential Mega DLO was 31 FTEs after absorbing FTEs from nearby DLOs. All potential Mega DLOs, with the exception of the Northeast Dallas Mega DLO, were assigned more FTEs than were model-reallocated and absorbed from nearby DLOs.

To begin the FTE Assignment process, each of the six potential Mega DLOs was assigned 25 FTEs. With Mega DLO FTE Assignments, three different scenarios occurred. In the first scenario, a potential Mega DLO was assigned more than 25 FTEs because it absorbed enough FTEs from a nearby DLO(s) to exceed 25 FTEs. This occurred with the Northeast Dallas potential Mega DLO. It absorbed FTEs from the Carrollton, Dallas-East, and Plano DLOs. In the second scenario, a potential Mega DLO absorbed FTEs from a nearby DLO(s) but the absorption was not enough for the FTEs to reach 25; therefore, the FTE Assignment remained at 25. This scenario occurred with the North Arlington, Katy, and Spring potential Mega DLOs. The North Arlington potential Mega DLO absorbed FTEs from the Hurst DLO. The Katy and Spring potential Mega DLOs both absorbed FTEs from the Houston-Grant Road DLO. In the third Mega DLO FTE Assignment scenario, a Mega DLO did not absorb any FTEs from a nearby DLO(s) and remained at 25 FTEs. This scenario